



हेमचंद्र यादव विश्वविद्यालय, दुर्ग (छ.ग.)

(पूर्व नाम- दुर्ग विश्वविद्यालय, दुर्ग)

रायपुर नका, दुर्ग (छ.ग.)-491001

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क्र. 477 /अका./2023

दुर्ग, दिनांक : 23/06/2023

प्राचार्य,

समस्त संबद्ध महाविद्यालय,

हेमचंद्र यादव विश्वविद्यालय,

दुर्ग (छ.ग.)

विषय:- स्नातक स्तर के नयीन पाठ्यक्रम के भाग-एक को सत्र 2023-24 से विश्वविद्यालय में लागू करने विषयक।
संदर्भ:- अपर संचालक, उच्च शिक्षा संचालनालय, नया रायपुर, अटल नगर का पत्र क्र. 3985/237/आलशि/2023, दिनांक 13.06.2023।

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विषयांतर्गत लेख है कि संदर्भित पत्र के माध्यम से प्राप्त स्नातक स्तर भाग-एक के निम्नलिखित कक्षा/विषयों के परिवर्तित/संशोधित पाठ्यक्रम शिक्षा सत्र 2023-24 से लागू किये जाते हैं:-

1. बी.ए. - आधार पाठ्यक्रम-हिन्दी भाषा, अंग्रेजी भाषा, हिन्दी साहित्य, अंग्रेजी साहित्य, राजनीतिशास्त्र, अर्थशास्त्र, नृत्य, दर्शनशास्त्र, समाजशास्त्र, इतिहास, संस्कृत, मानवविज्ञान, भूगोल, मनोविज्ञान, सांख्यिकी, कम्प्यूटर।
2. बी.एस-सी. - आधार पाठ्यक्रम-हिन्दी भाषा, अंग्रेजी भाषा, जीव विज्ञान, मानवविज्ञान, गणित, बायोटेक्नोलॉजी, कम्प्यूटर साईंस, भौतिकी, प्राणीशास्त्र, भूविज्ञान, आई.टी., सूक्ष्मजीवविज्ञान, वनस्पतिशास्त्र, इलेक्ट्रॉनिक्स, रसायन शास्त्र, सांख्यिकी, भूगोल।
3. बी.एस-सी. (गृह विज्ञान) - आधार पाठ्यक्रम - हिन्दी भाषा, अंग्रेजी भाषा एवं गृह विज्ञान।
4. बी.कॉम. - आधार पाठ्यक्रम - हिन्दी भाषा, अंग्रेजी भाषा एवं वाणिज्य।
5. विधि - एल.एल.बी., बी.ए.एल.एल.बी
6. प्रबंध - बी.बी.ए.
7. कम्प्यूटर - बी.सी.ए.
8. शिक्षा - बी.एड.
9. लाइब्रेरी साईंस - बी. लिब.

उपरोक्त विषयों को शिक्षा सत्र 2023-24 से संशोधित रूप में स्नातक स्तर भाग-एक के लिए लागू किया जाता है स्नातक स्तर भाग दो एवं तीन के पाठ्यक्रम यथावत रहेंगे।

अतः आपसे अनुरोध है कि पाठ्यक्रम परिवर्तन/संशोधन से महाविद्यालय के शिक्षकों एवं छात्र-छात्राओं को अवगत कराने का कष्ट करेंगे।

टीप :- परिवर्तित/संशोधित पाठ्यक्रम विश्वविद्यालय की वेबसाइट पर उपलब्ध है।

संलग्न : उपरोक्तानुसार।


कुलसचिव

क्र. 478 /अका./2023

दुर्ग, दिनांक 23.06.2023

प्रतिलिपि:-

1. अपर संचालक, उच्च शिक्षा संचालनालय, नवा रायपुर, अटल नगर का पत्र क्र. 3985/237/आउशि/2023, दिनांक 13.06.2023 के परिपेक्ष्य में सूचनार्थ।
2. कुलपति के निज सहायक एवं कुलसचिव के निज सहायक, हेमचंद यादव विश्वविद्यालय, दुर्ग।
3. उपकुलसचिव, परीक्षा विभाग एवं उपकुलसचिव, गोपनीय विभाग हेमचंद यादव विश्वविद्यालय, दुर्ग।


सहा. कुलसचिव (अका.)

REVISED ORDINANCE NO.11
(As per State U.G.C. Scheme)
BACHELOR OF ARTS

1. The three year course has been broken up in to three Parts.
Part-I Examination: at the end of the first year.
Part-II Examination: at the end of the second year and
Part-III Examination: at the end of the third year.
2. A candidate who after passing (10+2) or intermediate examination of C.G. Board of Secondary Education, C.G. or any other examination recognized by the University or C.G. Board of Secondary Education as equivalent there to, has attended regular course of study in an affiliated college or in the Teaching Department of the University for one academic year shall be eligible for appearing at the B.A. Part-I examination.
3. A candidate who after passing B.A. Part-I examination of the University or any other examination recognized by the University as equivalent there to has attended regular course of study for one academic year in an affiliated college or in the Teaching Department of the University shall be eligible for appearing at the B.A. Part II Examination.
4. A candidate who after passing B.A. Part II examination of the University has completed a regular course of study for one academic year in an affiliated college or in the Teaching Department of the University shall be eligible for appearing at the B.A. Part-III examination.
5. Besides regular students, subject to their compliance with this ordinance, ex-students and non-college at e can did ates shall be eligible for admission other examination as per provisions of Ordinance N. 6 relating to Examinations (General). Provided that non- college ate can did at es shall be permitted to offer only such subjects/paper as are taught to the regular students at any of the University Teaching Department or College.
6. Every candidate for the Bachelor of arts examination shall be examined in:
 - A Foundation Course:
 - (i) Group A - Hindi Language
 - (ii) Group B - English Language
 - B Three course subjects: One subject from any three group out of the following six groups:
 - 1 Sociology / Ancient Indian History/Anthropology
 - 2 Political Science/Home Science / Drawing & Painting / Vocational Course.
 - 3 Hindi Literature/ Sanskrit Literature/Urdu Literature/Mathematics.
 - 4 Economics/Music/Defense Studies/Linguistics/ u`R;
 - 5 Philosophy/Psychology/ Geography/ Education/Management.
 - 6 History/English Literature/Statistics.
 - 7 Practicals (If Necessary) for each core subject.

- 7 Any candidate who has passed the B.A. examination of the University shall be allowed to present himself for examination in any of additional subject prescribed for the B.A. examination and not taken by him at the degree examination. Such candidate will have to first appear and pass the B.A. Part I examination in the subject which he proposes to offer and then the B.A. Part II and Part III examination in the same subject. Successful candidate will be given a certificate to that effect.
- 8 In order to pass any part of the three year degree course examination, an examinee must obtain not less than 33% of the total marks in each subject/group of subjects. In subject /group of subjects, where both theory and practical examination are provided, an examinee must pass in both the theory and practical part so the examination separately.
- 9 Candidate will have to pass separately at the Part-I, Part II and part-III examination. No division shall be assigned on the result of the Part-I and Part-II examination. In determining the division of the Final examination, total marks obtained by the examinees, in their Part-I, Part-II and Part-III examination in the aggregate shall be taken into account. Candidate will not be allowed to change subjects after passing Part I Examination.
Provided in case of candidate who has passed the examination through the supplementary examination having failed in one subject only the total aggregate marks being carried over for determining the division shall include the actual mark so obtained in the subject in which he appeared at the supplementary examination.
- 10 Successful examinee at the Part-III examination obtaining 60% or more marks shall be placed in the First division, those obtain in less than 60% but not less than 45% marks in the Second division and other successful examinees in the third division.

SCHEME OF EXAMINATION

Subject	Paper	Max. Marks	Min. Marks
i) Environmental Studies		75	33
	Fild Work	25	
A. Foundation Course			
i) Hindi Language - I		75	26
ii) English Language - II		75	26
B. Three Core Subject :			
1. Hindi Literature	I	75	50
	II	75	
2. Sanskrit Literature	I	75	50
	II	75	
3. English Literature	I	75	50
	II	75	
4. Philosophy	I	75	50
	II	75	
5. Economics	I	75	50
	II	75	
6. Political Science	I	75	50
	II	75	
7. History	I	75	50
	II	75	
8. Ancient Indian History	I	75	50
	II	75	
9. Sociology	I	75	50
	II	75	
10. Geography	I	50	33
	II	50	
11. Mathematics	Practical	50	17
	I	50	
	II	50	50
	III	50	
12. Statistics	I	50	33
	II	50	
	Practical	50	17

	Subject	Paper	Max. Marks	Min. Marks
13.	Anthropology	I	50	33
		II	50	
		Practical	50	
14.	Linguistics	I	75	50
		II	75	
15.	Music	I	50	33
		II	50	
		Practical	50	
16.	Home Science	I	50	33
		II	50	
		Practical	50	
17.	Education	I	75	50
		II	75	
18.	Psychology	I	50	33
		II	50	
		Practical	50	
19.	Management	I	75	50
		II	75	
20.	Defence Studies	I	50	33
		II	50	
		Practical	50	
21.	Urdu	I	75	50
		II	75	
22.	Dance	I	50	33
		II	50	
		Practical	50	

USE OF CALCULATORS

The Students of Degree/P.G. Classes will be permitted to use of Calculators in the examination hall from annual 1986 examination on the following conditions as per decision of the standing committee of the Academic Council at its meeting held on 31-1-1986-

1. Student will bring their own Calculators.
2. Calculators will not be provided either by the university or examination centres.
3. Calculators with, memory and following variables be permitted +, -, x, , square, reciprocal, expotentials log, square root, trigonometric functions, wize, sine, cosine, tangent etc. factorial summation, xy, yx and in the light of objective approval of merits and demerits of the viva only will be allowed.

Part - I

SYLLABUS FORENVIRONMENTAL STUDIES AND HUMAN RIGHTS

(Papercode-0828)

MM. 75

इन्वारमेंटल साईसे के पाठ्यक्रम को स्नातक स्तर भाग-एक की कक्षाओं में विश्वविद्यालय अनुदान आयोग के निर्देशानुसार अनिवार्य रूप से शिक्षा सत्र 2003-2004 (परीक्षा 2004) से प्रभावशील किया गया है। स्वशासी महाविद्यालयों द्वारा भी अनिवार्य रूप से अंगीकृत किया जाएगा।

भाग 1, 2 एवं 3 में से किसी भी वर्ष में पर्यावरण प्रश्न-पत्र उत्तीर्ण करना अनिवार्य है। तभी उपाधि प्रदाय योग्य होगी।

पाठ्यक्रम 100 अंकों का होगा, जिसमें से 75 अंक सैद्धांतिक प्रश्नों पर होंगे एवं 25 अंकक्षेत्रीय कार्य (Field Work) पर्यावरण पर होंगे।

सैद्धांतिक प्रश्नों पर अंक - 75 (सभी प्रश्न इकाई आधार पर रहेंगे जिसमें विकल्प रहेगा)

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| (अ) लघु प्रश्नोंत्तर | - | 25 अंक |
| (ब) निबंधात्मक | - | 50 अंक |

Field Work- 25 अंकों का मूल्यांकन आंतरिक मूल्यांकन पद्धति से कर विश्वविद्यालय को प्रेषित किया जावेगा। अभिलेखों की प्रायोगिक उत्तर पुस्तिकाओं के समान संबंधित महाविद्यालयों द्वारा सुरक्षित रखेंगे।

उपरोक्त पाठ्यक्रम से संबंधित परीक्षा का आयोजन वार्षिक परीक्षा के साथ किया जाएगा।

पर्यावरण विज्ञान विषय अनिवार्य विषय है, जिसमें अनुत्तीर्ण होने पर स्नातक स्तर भाग-एक के छात्र/छात्राओं को एक अन्य विषय के साथ पूरक की पात्रता होगी। पर्यावरण विज्ञान के

सैद्धांतिक एवं फील्ड वर्क के संयुक्त रूप से 33: (तीस प्रतिशत) अंक उत्तीर्ण होने के लिए अनिवार्य होंगे।

स्नातक स्तर भाग-एक के समस्त नियमित/भूतपूर्व/अमहाविद्यालयीन छात्र/छात्राओं को अपना फील्ड वर्क सैद्धांतिक परीक्षा की समाप्ति के पश्चात् 10 (दस) दिनों के भीतर संबंधित महाविद्यालय/परीक्षा केन्द्र में जमा करेंगे एवं महाविद्यालय के प्राचार्य/केन्द्र अधीक्षक, परीक्षकों की नियुक्ति के लिए अधिकृत रहेंगे तथा फील्ड वर्क जमा होने के सात दिनों के भीतर प्राप्त अंक विश्वविद्यालय को भेजेंगे।

UNIT-I THE MULTI DISCIPLINARY NATURE OF ENVIRONMENTAL STUDIES

Definition, Scope and

Importance Natural Resources:

Renewable and Nonrenewable Resources

- (a) Forest resources: Use and over-exploitation, deforestation, Timber extraction, mining, dams and their effects on forests and tribal people and relevant forest Act.
- (b) Water resources: Use and over-utilization of surface and ground water, floods drought, conflicts over water, dam's benefits and problems and relevant Act.
- (c) Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources.
- (d) food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity.
- (e) Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources.
- (f) Land resources: Land as a resource, land degradation, man induced landslides soil erosion and desertification.

(12 Lecture)

UNIT-II ECOSYSTEM

(a) Concept, Structure and Function of an ecosystem

- Producers, consumers and decomposers.
- Energy flow in the ecosystem
- Ecological succession
- Food chains, food webs and ecological pyramids.
- Introduction, Types, Characteristics Features, Structure and Function of Forest, Grass, Desert and Aquatic Ecosystem.

(b) Biodiversity and its Conservation

- Introduction - Definition: genetic, species and ecosystem diversity
- Bio-geographical classification of India.
- Value of biodiversity: Consumptive use, productive use, social ethics, aesthetic and option values.
- Biodiversity at global, National and local levels.
- India as mega-diversity nation.
- Hot spots of biodiversity.
- Threats to biodiversity: habitat loss, poaching of wildlife, man-wild life conflict.
- Endangered and endemic species of India.
- Conservation of biodiversity: In situ and Ex-situ conservation of biodiversity.

(12Lecture)

UNIT- III

(a) Causes, effect and control measures of

- Air water, soil, marine, noise, nuclear pollution and Human population.
- Solid waste management: Causes, effects and control measures of urban and industrial wastes.
- Role of an individual in prevention of pollution.
- Disaster Management: floods, earthquake, cyclone and landslides.

(12Lecture)

(b) Environmental Management

- From Unsustainable to sustainable development.
- Urban problems related to energy.
- Water conservation, rain water harvesting, watershed management.
- Resettlement and rehabilitation of people, its problems and concerns.
- Environmental ethics: Issues and possible solutions.
- Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust.
- Wasteland reclamation
- Environment protection Act: Issues involved in enforcement of environmental legislation.
- Role of Information Technology in Environment and Human Health.

UNIT- IV

General background and historical perspective- Historical development and concept of Human Rights, Meaning and definition of Human Rights, Kind and Classification of Human Rights. Protection of Human Rights under the UNO Charter, protection of Human Rights under the Universal Declaration of Human Rights, 1948.

Convention on the Elimination of all forms of Discrimination against women.

Convention on the Rights of the Child, 1989.

UNIT-V

Impact of Human Rights norms in India, Human Rights under the Constitution of India, Fundamental Rights under the Constitution of India, Directive Principles of State policy under the Constitution of India, Enforcement of Human Rights in India.

Protection of Human Rights under the Human Rights Act, 1993- National Human Rights Commission, State Human Rights Commission and Human Rights court in India. Fundamental Duties under the Constitution of India.

Reference/ Books Recommended

1. SK Kapoor- Human rights under International Law and Indian Law.
2. HO Agrawal- International Law and Human Rights
3. एस.के. कपूर –मानव अधिकार
4. जे.एन. पान्डेय – भारत का संविधान
5. एम.डी. चतुर्वेदी – भारत का संविधान
6. J.N.Pandey - Constitutional Law of India
7. Agarwal K.C. 2001 Environmental Biology, Nidi pub. Ltd. Bikaner
8. Bharucha Erach, the Biodiversity of India, Mapin pub. Ltd. Ahmedabad 380013, India, Email:mapin@icenet.net(R)
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10. Clark R.S. Marine pollution, Clarendon press Oxford (TB)
11. Cuningham, W.P. Cooper. T.H. Gorhani, E & Hepworth. M.T, 200
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13. Down to Earth, Center for Science and Environment (R)
14. Gloick, H.P. 1993 Water in crisis. Pacific Institute for Studies in Development, Environment & Security. Stockholm Eng. Institute. Oxford University, Press. m473p.
15. Hawkins R.E. Encyclopedia of Indian Natural History, Bombay Natural History Society, Mumbai (R)
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18. McKinney M.L. & School R.M. 1996, Environmental Science systems & solutions, web enhanced edition, 639p
19. Mhadkar A.K. Matter Hazardous, Techno-Science publication (TB)
20. Miller T.G. Jr. Environment Science, Wadsworth publication co. (TB)
21. Odum E.P. 1971, Fundamentals of Ecology, W.B. Saunders Co. USA, 574p
22. Rao M.N. & Datta, A.K. 1987, Waste water treatment. Oxford & IBH pub. co. Pvt. Ltd 345p
23. Sharma B.K. 2001, Environmental chemistry, Goel pub. House, Meerut
24. Survey of the Environment, The Hindu (M)
25. Townsend C. Harper J. And Michael Begon, Essentials of Ecology, Blackwell Science (TB)
26. Trivedi R.K. Handbook of Environment Laws, Rules, Guidelines, Compliances and Standards, Vol I and II, Environment Media (R)
27. Trivedi R.K. and P.K. Goel, Introduction to air pollution, Techno-Science publication (TB)
28. Wanger K.D. 1998, Environmental Management. W.B. Saunders Co. Philadelphia, USA 499p

Part - I
SYLLABUS FOR ENVIRONMENTAL STUDIES AND HUMAN RIGHTS
(Paper code-0828)

MM. 75

इन्वारमेंटल साईंसेस के पाठ्यक्रम को स्नातक स्तर भाग—एक की कक्षाओं में विश्वविद्यालय अनुदान आयोग के निर्देशानुसार अनिवार्य रूप से शिक्षा सत्र 2003—2004 (परीक्षा 2004) से प्रभावशील किया गया है। स्वशासी महाविद्यालयों द्वारा भी अनिवार्य रूप से अंगीकृत किया जाएगा।

भाग 1, 2 एवं 3 में से किसी भी वर्ष में पर्यावरण प्रश्न—पत्र उत्तीर्ण करना अनिवार्य है। तभी उपाधि प्रदाय योग्य होगी।

पाठ्यक्रम 100 अंकों का होगा, जिसमें से 75 अंक सैद्धांतिक प्रश्नों पर होंगे एवं 25 अंक क्षेत्रीय कार्य (Field Work) पर्यावरण पर होंगे।

सैद्धांतिक प्रश्नों पर अंक — 75 (सभी प्रश्न इकाई आधार पर रहेंगे जिसमें विकल्प रहेगा)

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|----------------------|---|--------|
| (अ) लघु प्रश्नोंत्तर | — | 25 अंक |
| (ब) निबंधात्मक | — | 50 अंक |

Field Work — 25 अंकों का मूल्यांकन आंतरिक मूल्यांकन पद्धति से कर विश्वविद्यालय को प्रेषित किया जावेगा। अभिलेखों की प्रायोगिक उत्तर पुस्तिकाओं के समान संबंधित महाविद्यालयों द्वारा सुरक्षित रखेंगे।

उपरोक्त पाठ्यक्रम से संबंधित परीक्षा का आयोजन वार्षिक परीक्षा के साथ किया जाएगा।

पर्यावरण विज्ञान विषय अनिवार्य विषय है, जिसमें अनुत्तीर्ण होने पर स्नातक स्तर भाग—एक के छात्र/छात्राओं को एक अन्य विषय के साथ पूरक की पात्रता होगी। पर्यावरण विज्ञान के सैद्धांतिक एवं फील्ड वर्क के संयुक्त रूप से 33: (तीस प्रतिशत) अंक उत्तीर्ण होने के लिए अनिवार्य होंगे।

स्नातक स्तर भाग—एक के समस्त नियमित/भूतपूर्व/अमहाविद्यालयीन छात्र/छात्राओं को अपना फील्ड वर्क सैद्धांतिक परीक्षा की समाप्ति के पश्चात् 10 (दस) दिनों के भीतर संबंधित महाविद्यालय/परीक्षा केन्द्र में जमा करेंगे एवं महाविद्यालय के प्राचार्य/केन्द्र अधीक्षक, परीक्षकों की नियुक्ति के लिए अधिकृत रहेंगे तथा फील्ड वर्क जमा होने के सात दिनों के भीतर प्राप्त अंक विश्वविद्यालय को भेजेंगे।

UNIT-I THE MULTI DISCIPLINARY NATURE OF ENVIRONMENTAL STUDIES

Definition, Scope and

Importance Natural Resources:

Renewable and Nonrenewable Resources

- (a) Forest resources: Use and over-exploitation, deforestation, Timber extraction, mining, dams and their effects on forests and tribal people and relevant forest Act.
- (b) Water resources: Use and over-utilization of surface and ground water, floods drought, conflicts over water, dam' s benefits and problems and relevant Act.
- (c) Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources.
- (d) Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity.
- (e) Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources.
- (f) Land resources: Land as a resource, land degradation, man induced landslides soil erosion and desertification.

(12 Lecture)

UNIT-II ECOSYSTEM

(a) Concept, Structure and Function of and ecosystem

- Producers, consumers and decomposers.
- Energy flow in the ecosystem
- Ecological succession
- Food chains, food webs and ecological pyramids.
- Introduction, Types, Characteristics Features, Structure and Function of Forest, Grass, Desert and Aquatic Ecosystem.

(b) Biodiversity and its Conservation

- Introduction - Definition: genetic. species and ecosystem diversity
- Bio-geographical classification of India.
- Value of biodiversity: Consumptive use. Productive use, social ethics, aesthetic and option values.
- Biodiversity at global, National and local levels.
- India as mega-diversity nation.

- Hot spots of biodiversity.
- Threats to biodiversity: habitat loss, poaching of wildlife, man-wild life conflict.
- Endangered and endemic species of India.
- Conservation of biodiversity: In situ and Ex-situ conservation of biodiversity.

(12 Lecture)

UNIT- III

(a) Causes, effect and control measures of

- Air water, soil, marine, noise, nuclear pollution and Human population.
- Solid waste management: Causes, effects and control measures of urban and industrial wastes.
- Role of an individual in prevention of pollution.
- Disaster Management: floods, earthquake, cyclone and landslides.

(12 Lecture)

(b) Environmental Management

- From Unsustainable to sustainable development.
- Urban problems related to energy.
- Water conservation, rain water harvesting, watershed management.
- Resettlement and rehabilitation of people, its problems and concerns.
- Environmental ethics: Issues and possible solutions.
- Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust.
- Wasteland reclamation
- Environment protection Act: Issues involved in enforcement of environmental legislation.
- Role of Information Technology in Environment and Human Health.

UNIT- IV

General background and historical perspective- Historical development and concept of Human Rights, Meaning and definition of Human Rights, Kind and Classification of Human Rights. Protection of Human Rights under the UNO Charter, protection of Human Rights under the Universal Declaration of Human Rights, 1948. Convention on the Elimination of all forms of Discrimination against women. Convention on the Rights of the Child, 1989.

UNIT- V

Impact of Human Rights norms in India, Human Rights under the Constitution of India, Fundamental Rights under the Constitution of India, Directive Principles of State policy under the Constitution of India, Enforcement of Human Rights in India. Protection of Human Rights under the Human Rights Act, 1993- National Human Rights Commission, State Human Rights Commission and Human Rights court in India. Fundamental Duties under the Constitution of India.

Reference/ Books Recommended

1. SK Kapoor- Human rights under International Law and Indian Law.
2. HO Agrawal- Internation Law and Human Rights
3. एस.के. कपूर – मानव अधिकार
4. जे.एन. पान्डेय – भारत का संविधान
5. एम.डी. चतुर्वेदी –भारत का संविधान
6. J.N.Pandey - Constitutional Law of India
7. Agarwal K.C. 2001 Environmental Biology, Nidi pub. Ltd. Bikaner
8. Bharucha Erach, the Biodiversity of India, Mapin pub. Ltd. Ahmedabad 380013, India, Email: mapin@icenet.net(R)
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10. Clark R.S. Marine pollution, Clanderson press Oxford (TB)
11. Cuningham, W.P.Cooper. T.H.Gorhani, E & Hepworth. M.T,200
12. Dr. A.K.- Environmental Chemistry. Wiley Eastern Ltd.
13. Down to Earth, Center for Science and Environment (R)
14. Gloick, H.P. 1993 Water in crisis. pacific institute for studies in Deve. Environment & Security. Stockholm Eng. Institute. Oxford University, Press. m 473p.
15. Hawkins R.E. Encyclopedia of Indian Natural History, Bombay Natural History Society, Mumbai (R)

16. Heywood, V.H. & Watson, T.T.1995 Global Biodiversity Assessment, Cambridge Univ. Press 1140p
17. Jadhav H. & Bhosale, V.H. 1995 Environmental Protection and Law. Himalaya pub. House, Delhi 284p
18. Mckinney M.L.& School R.M.1996, environmental Science systems & solutions, web enhanced edition, 639p
19. Mhadkar A.K. Matter Hazardous, Techno-Science publication(TB)
20. Miller T.G.Jr. Environment Science, Wadsworth publication co. (TB)
21. Odum E.P.1971, Fundamentals of Ecology, W.B. Saunders Co. USA,574p
22. Rao M.N. & Datta, A.K. 1987, Waste water treatment. Oxford & IBH pub.co.pvt. Ltd 345p
23. Sharma B.K. 2001, Environmental chemistry, Goel pub. House, Meerut
24. Survey of the Environment, The Hidu(M)
25. Townsend C. Harper J. And Michael Begon, Essentials of Ecology, Blackwell Science(TB)
26. Trivedi R.K.Handbook of Environment Laws, Rules, Guidelines, Compliances and Standards, Vol land II, Environment Media(R)
27. Trivedi R.K. and P.K. Goel, Introduction to air pollution, Techno-Science publication (TB)
28. Wanger K.D.1998, Environmental Management. W.B. Saunders Co. Philadelphia, USA 499

बी.ए./ बी.एस-सी./ बी.कॉम./ बी.एच.एस.सी. भाग -एक

(आधार पाठ्यक्रम)

प्रथम प्रश्नपत्र

हिंदी भाषा

कोड....

पूर्णांक 75

क्रेडिट 05

पाठ्यक्रमका उद्देश्य:-

- 1.हिंदी भाषाके प्रयोजनात्मक स्वरूप का सामान्य ज्ञान प्रदान करना।
- 2.कंप्यूटर में हिंदी भाषा के प्रयोग की आवश्यकता के अनुरूप कंप्यूटर की कार्य प्रणाली की आरंभिक जानकारी से अवगत होने के लिए प्रेरित करना।
- 3.हिंदी व्याकरण की बुनियादी ज्ञान संप्रेषण कौशल तथा भाषायी दक्षता से अवगत कराना।
- 4.साहित्य और समाज को समझने की दिशा में रुझान उत्पन्न करना।

पाठ्य विषय:-

इकाई 1. (क) पल्लवन, पत्राचार, अनुवाद (ख) एक टोकरी भर मिट्टी : माधवराव सप्रे बड़े भाई साहब : प्रेमचंद	अंक 15 18 कालखंड
इकाई 2. (क) संक्षेपण, हिंदी में संक्षिप्तिकरण, हिंदी-अपठित गद्यांश, पारिभाषिक शब्दावली, हिंदी में पदनाम, मुहावरे एवंलोकोक्तियाँ (ख) जागो फिर एक बार: सूर्यकांत त्रिपाठी 'निराला' जन्मदिन ('मिट्टी से कर्तूंगाधन्यवाद' संग्रह से):एकांत श्रीवास्तव	अंक 15 18 कालखंड
इकाई 3. (क) शब्द-शुद्धि, वाक्य-शुद्धि, शब्द-ज्ञान- पर्यायवाची शब्द, विलोम शब्द, अनेकार्थी-शब्द, समश्रुत शब्द, अनेक शब्दों के लिए एक शब्द (ख) भोलाराम का जीव : हरिशंकर परसाई जीप पर सवार इल्लियां: शरद जोशी	अंक 15 18 कालखंड
इकाई 4.(क) मानक भाषा का अर्थ, मानक हिंदी भाषाका अर्थ, स्वरूप,	अंक 15

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विशेषताएँ, मानक, उपमानक, अमानक-भाषा (ख)शिकागो से स्वामी विवेकानंद का पत्र सत्य और अहिंसा : महात्मा गांधी	18 कालखंड
इकाई 5. (क) देवनागरी लिपि- नामकरण, स्वरूप, विशेषताएँ, कंप्यूटर का सामान्य परिचय, कंप्यूटर में हिंदी का अनुप्रयोग। (ख)कछुआ-धरम : चन्द्रधर शर्मा गुलेरी छत्तीसगढ़ का वैभव: हीरालाल शुक्ल	अंक 15 18 कालखंड

मूल्यांकन योजना:-

प्रत्येक इकाई से एक-एक प्रश्न पूछे जाएंगे। एक प्रश्न के 15 अंक होंगे। प्रत्येक प्रश्न में आंतरिक विकल्प होगा। प्रत्येक प्रश्न के दो भाग 'क' और 'ख' होंगे एवं अंक क्रमशः 08 एवं 07 होंगे। प्रश्नपत्र का पूर्णांक 75 निर्धारित है।

प्रश्नपत्रकेपूर्णांककादसप्रतिशतअंकआंतरिकमूल्यांकनकेलिएनिर्धारितहै।

पाठ्यक्रम अधिगम परिणाम:-

इस पाठ्यक्रम को पूर्ण करने के पश्चात विद्यार्थी:-

- 1.हिंदी प्रयोजनात्मक तथा कार्यशील भाषा के प्रति सजग होंगे।
- 2.भाषा संबंधी संभावित अशुद्धियाँ एवं उनके परिष्कारसे परिचित होंगे तथा मानक भाषा का व्यवहार करने में सक्षम होंगे।
- 3.विद्यार्थियों के शब्द भंडार में वृद्धि होगी।
- 4.हिंदी साहित्य के पठन-पाठन के प्रति रुचि जागृत होगी एवं सामाजिक महत्व के विविध आयामों को समझने की दृष्टि विकसित होगी।

पाठ्यक्रम निर्माण का औचित्य:-

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23.2.2023

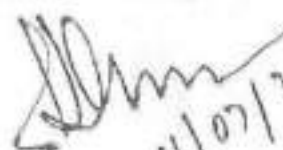
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BA/B.Sc./B.Com/B.Sc. Home.Sc. (Part-I)
Foundation Course Paper-II English Language

Max. Marks:75
 Total credits: 05

Qualifying Marks:26

Paper-II	Mark's	Period's	Credit
Unit-I Flamingo : A Textbook for college students Publication : Macmillan Publishers	3x5=15	18	01
Unit -II <ul style="list-style-type: none"> • Writing Skill • Describing a place or a person. • Writing a Biographical Sketch • Narrating an event or experience 	1x10=10	18	01
Unit -III Reading Comprehension <ul style="list-style-type: none"> • (a) Unseen Passage (Normal) • (b) Vocabulary (Text-based) 	1x5=05 1x10=10	18	01
Unit -IV Letter Writing (a) Formal Letters (Business Letters/ Application/Press/ Official Letters) (b) Informal Letters (Relatives and friends)	1x5=5 1x5=5	09	0.5
Unit-V Grammar <ul style="list-style-type: none"> • Articles • Gerunds /Participles • Subject Verb Agreement • Use of Conjunctions • Tenses • Relatives • Possessives & self forms • Grammatical items given in Textbook 'Flamingo' 	1x25=25	27	1.5
Total	75	90	05
Recommended Books- 1. Essential English Grammar, 2nd Edition by Raymond Murphy, Cambridge Publication 2. English Grammar in use 5th edition by Raymond Murphy, Cambridge Publication. 3. Advanced English Grammar by Martine Hewings Cambridge University Press.			


 11/07/2023
 (P.C. Choudhury)

एक वर्षीय प्रमाणपत्र पाठ्यक्रम
(सत्र-2022-23)

बी.ए. भाग-1
(हिंदी साहित्य) प्रथम प्रश्नपत्र
प्राचीन हिंदी काव्य

पूर्णांक: 75
क्रेडिट - 5, 90 कालखण्ड

उद्देश्य एवं प्रस्तावना : प्राचीन से यहां तत्पर्य है- आधुनिक काल से पूर्व का काल। सही अर्थ में हिंदी भाषा और साहित्य का विकास आदिकाल से शुरू होता है। इसमें धार्मिक तथा ऐतिहासिक दो प्रकार का साहित्य मिलता है, जो प्रबंध, मुक्तक, रासो, फागु, चरित, सुभाषित आदि विविध काव्यरूपों में अभिव्यजित हैं। मध्यकालीन साहित्य की पृष्ठभूमि के रूप में इसे प्रतिष्ठापित किया जाता है। मध्यकालीन काव्य में भक्तिकाव्य, जहां लोक जागरण को स्वर देने वाला है वही रीति काल अपने लौकिक, क्षुण्णिक, परिदृश्य में तात्कालीन सामाजिक, सांस्कृतिक, राजनीतिक स्थितियों को बेहोस अभिव्यजित करता है। अतः भाषा संस्कृति, विचार, मानवता, काव्यत्व, काव्यरूपत्व, लौकिकता-पारलौकिकता आदि दृष्टियों से इसका अध्ययन अत्यावश्यक है।

पाठ्य विषय : प्राचीन हिन्दी काव्य की पृष्ठभूमि एवं प्रवृत्तियाँ

1. कबीरदास : (कबीर-कांतिकुमार जैन-प्रारंभिक 50 राधियाँ।)
2. ज्ञानदास : (संक्षिप्त पद्मावत-श्यामसुंदर दास, नागमती वियोग वर्णन)
3. सूरदास : (भ्रमरगीत संग्रह-संपादक आचार्य रामचंद्र शुक्ल- प्रारंभिक 25 पद)
4. तुलसीदास : "श्रीरामचरितमानस" के सुंदरकांड से प्रारंभिक 30 दोहे, चौपाई, छंद सहित।
5. घनानन्द : (घनानन्द-संपादक, विश्वनाथ प्रसाद मिश्र- प्रारंभिक 25 छंद)

दुतापठ : इसके अंतर्गत 1. विद्यापति 2. रहीम 3. रसखान 4. गोपाल मिश्र का अध्ययन किया जाएगा, जिनमें से किन्ती दो पर लघु उत्तरीय प्रश्न पूछे जाएंगे।

अंक विभाजन

3 व्याख्याएँ	अंक-21
2 आलोचनात्मक प्रश्न	अंक-24
3 लघु उत्तरीय प्रश्न	अंक-15
15 वस्तुनिष्ठ प्रश्न	अंक-15

कुल-75 अंक

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इकाई विभाजन :

इकाई एक - व्याख्या	18 कालखण्ड
इकाई दो- कबीर, जायसी	18 कालखण्ड
इकाई तीन - सूर, तुलसी, घनानंद	18 कालखण्ड
इकाई चार - द्रुत पाठ के कवि- विद्यापति, रहीम, रसखान, गोपाल मिश्र	18 कालखण्ड
इकाई पाँच - यस्तुनिष्ठ प्रश्न (सम्पूर्ण इकाई से)	18 कालखण्ड

पाठ्यक्रम अध्ययन की परिलब्धियों (CLO)

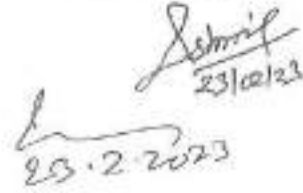
1. विद्यार्थियों को हिंदी साहित्य की प्रारंभिक काव्य परंपरा एवं रचना शिल्प से परिचित कराना।
2. प्राचीन हिंदी काव्य के अंतर्गत आदिकाल, भक्तिकाल एवं रीतिकाल के प्रतिनिधि कवियों के साहित्य के प्रति मूलभूत समझ विकसित करना।
3. साहित्य के माध्यम से विद्यार्थियों में प्रेम, सद्भाव एवं जीवन मूल्यों का विकास करना।
4. छत्तीसगढ़ प्रदेश के कवियों एवं उनके साहित्यिक अवदान के प्रति विद्यार्थियों में अभिरूचि जागृत करना।

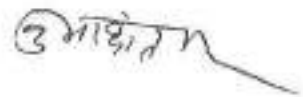









23/02/23


उमाशंकर





बी.ए. भाग-1
(हिंदी साहित्य) द्वितीय प्रश्नपत्र
हिंदी कथा साहित्य

पूर्णांक: 75
क्रेडिट-5, 90 कालखण्ड

उद्देश्य एवं प्रस्तावना : गद्य की प्रमुख विधाओं का द्रुत विकास इनकी लोकप्रियता का प्रमाण प्रस्तुत करता है। इसमें आधुनिक जीवन, अपनी विविध कमियों के साथ यथार्थ रूप में अभिव्यंजित हुआ है। जीवन की अनुभूतियाँ, संवेदनाओं तथा विविध परिस्थितियों के साक्षात्कार के लिए इनका अध्ययन सर्वथा अपेक्षित है।

साध्य विषय : व्याख्या एवं आलोचनात्मक प्रश्नों के लिए एक उपन्यास एवं आठ कहानीकारों की एक-एक प्रतिनिधि कहानी का अध्ययन आवश्यक है।

उपन्यास :	1. गबन	- मुंशी प्रेमचंद
कहानी :	1. पूस की रात	- मुंशी प्रेमचंद
	2. आकासदीप	- जयशंकर प्रसाद
	3. परदा	- यशपाल
	4. लाल घान की देगम	- फणीश्वरनाथ रेणु
	5. मलबे का मालिक	- मोहन राकेश
	6. चीफ की दावत	- भीष्म साहनी
	7. जली हुई रस्सी	- गुलशेर खाँ शानी
	8. नकली हीरे	- मन्मू भंडारी

द्रुतपाठ के लिए निम्नांकित चार कथाकारों का अध्ययन अपेक्षित है, जिनमें से किन्हीं दो पर लघु उत्तरीय प्रश्न पूछे जाएंगे।

1. उपेन्द्रनाथ अश्क 2. बालशौरि रेड्डी 3. शिवानी 4. पद्मलाल पुन्नालाल बख्शी

अंक विभाजन

3 व्याख्याएं	अंक - 21
2 आलोचनात्मक प्रश्न	अंक - 24
3 लघु उत्तरीय प्रश्न	अंक - 15
15 वस्तुनिष्ठ प्रश्न	अंक - 15

कुल - 75 अंक

Asht
08/08/2023

इकाई विभाजन :

इकाई एक - व्याख्या	18 कालखण्ड
इकाई दो- गबन (उपन्यास), पूरा की रात, आकाशदीप, परदा (फहलिनियों)	18 कालखण्ड
इकाई तीन -लाल पान की बेगम, मलबे का मालिक, धौफ की दावत, जली हुई रस्सी, नकली हीरे	18 कालखण्ड
इकाई चार -(क)दुत पाठ के कथाकार- उपेन्द्रनाथ अश्क, बालशौरि रेड्डी, शिवानी, पदुनलाल पुन्नालाल बख्शी	
(ख)हिंदी कथा साहित्य का विकास	18 कालखण्ड
इकाई पाँच - वस्तुनिष्ठ प्रश्न/अतिरिक्ततरीय प्रश्न (सम्पूर्ण पाठ्यक्रम से)	18 कालखण्ड

पाठ्यक्रम अध्ययन की परिलक्षियों (CLO)

1. विद्यार्थियों को हिंदी उपन्यास एवं हिन्दी कहानी की विकास यात्रा से परिचित कराना।
2. उपन्यास एवं कहानी विधा की सिल्पगत विशेषताओं से अवगत कराना।
3. मुंशी प्रेमचंद एवं सुप्रसिद्ध कहानीकारों के व्यक्तित्व, कृतित्व एवं साहित्यिक अवदान से विद्यार्थियों को परिचित कराना।
4. छत्तीसगढ़ प्रदेश के साहित्यकारों के रचनात्मक कौशल एवं हिंदी कथा साहित्य की अंतर्वस्तु की समझ विकसित करना।

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08/08/2023

B.A. Part - I
English Literature
Paper-I
Literature in English-1550-1750

- (i) Unit - 1 of Annotation is compulsory, and passages to be set from Units (II to V) at least one from each unit, 3 to be attempted. 3x5=15
- (ii) Multiple choice/objective type questions to be set Unit vi, 15 to be set 10 be attempted. 1x10=10
- (iii) From Unit-II to VI- 8 questions to be set at least one from each unit - 5 to be attempted. 10x5=10
- Word Limit for each answer 300 to 400 words.

UNIT-I ANNOTATIONS

UNIT- II POETRY

- (a) William Shakespeare - Sonnet No. 1 From Fairest Creatures,
Sonnet No. 55 Not Marble nor the Gilded Monuments
- (b) John Milton - How Soon Hath Time the subtle of Youth....
- (c) John Donne - Death Be not Proud, The Good Morrow

UNIT-III POETRY

- (a) John Dryden - Portrait of Shadwell.
- (b) Alexander Pope - From An Essay on Criticism (True ease in writing ... And the world's victor stood subdu'd by sound!)

UNIT-IV PROSE

- (a) Francis Bacon - Of Studies, Of Health, Of Friendship
- (b) Joseph Addison - Sir Roger at Home
- (c) Richard Steele - Of the Club.

UNIT-V DRAMA

- William Shakespeare - The Tempest

UNIT-VI FICTION

- Jonathan Swift - Gulliver's Travels

UNIT- 7 LITERARY TOPICS

- (i) Poetic Forms :- Lyric, Sonnet, Ode, Elegy, Ballads, Epic, Objective and Subjective Poetry.
- (ii) Dramatic Forms :- Mystery and Miracle Plays, Morality Plays, Tragedy, Comedy, Poetic Drama, Interlude, Melodrama, Farce, Masque.
- (iii) Prose Forms :- Objective and Subjective Essays, Novels, Autobiography, Travel Writing.
- (iv) Dramatic Devices :- Plot, Soliloquy, Aside, Characterization, Dramatic Irony

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BOOKS RECOMMENDED FOR UNIT VII TN PAPERS I AND II

1. Edward Albeft - A History of English Literature
2. Ifor Evans - A short History of English Literature.
3. Hudson - An Outline History of English Literatur
- 4 B. Prasad - A Background Study of English Literature.

CREDIT & PERIOD DETAILS

S.No.	Unit	Periods	Credit(Point)
1	2	15	1.0
2	3	11	0.73
3	4	15	1.0
4	5	15	1.0
5	6	10	0.67
6	7	09	0.60
		75	5.00

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B.A. Part I
English Literature
Paper-I (Literature In English :1550-1750)
Course outcome

After completing the Course the students will able to demonstrate:

- co 01- a comprehensive knowledge of the literary works in English produced by the British writers this knowledge will include the various literary forms fictional as well as non- fictional employed by the British writers and Historical and Literary topics as well.
- co 02- a critical understanding of the poets like shakespeare' Milton and John Donne, John Dryden and Alexander Pope, playwrights like shakespeare' non fictional writers like Bacon, Addison, and Steele and the novelists like Swift.
- co 03- a capacity to compare and contrast the different literary qualities of the writers and critically rank them in evaluative terms.
- co 04- a critical inclination to read literature as a socio-cultural document'
- co 05- a research tendency to go for Innovative studies like English Literature in the postcolonial light of the latest research insights.
- co 06- a socio- political sense of responsibility to stand up against colonizing human tendencies.
- co 07- a visible literary- critical bent towards understanding life through literature.

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B.A. Part - I
English Literature
Paper - II (Literature in English: 1750-1900)

- Note- (i) Unit - 1 of Annotation is compulsory, 6 Passages be set from Units (II to IV) at least one from each unit, 3 to be attempted 3x5=15
(ii) Multiple choice/objective type questions to be set from unit- VII, 25 to be set 10 to be attempted. 1x10=10
(iii) From Unit-II to VI-8 questions to be set at least one from each unit- 5 to be attempted, 10x5=50
Word Limit for each answer 300 to 400 words.

UNIT-I ANNOTATIONS

UNIT-II POETRY

- (a) William Blake - Tyger, Tyger Burning Bright.
(b) William Wordsworth - Daffodils, Upon Westminster Bridge.
(c) S.T. Coleridge - Frost at Midnight.

UNIT-III POETRY

- (a) P.B. Shelley - Ode to the West Wind
(b) John Keats - Ode to Autumn.
(c) Alfred Tennyson - Crossing the Bar.
(d) Robert Browning - Prospice

UNIT-IV PROSE

- (a) Charles Lamb - Dream Children: A Reverie
(b) William Hazlitt - On Going a Journey - On Going a Journey

UNIT-V FICTION

- Jane Austen - Pride and Prejudice.

UNIT-VI FICTION

- Charles Dickens - A Tale of Two Cities

UNIT-7 LITERARY TOPICS

- (1) Simile
- (2) Metaphor
- (3) Alliteration
- (4) Paradox
- (5) Metonymy
- (6) Oxymoron
- (7) Synecdoche
- (8) Exaggeration or Hyperbole
- (9) Antithesis
- (10) Personification
- (11) Apostrophe
- (12) Onomatopoeia

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(13) Dramatic Monologue

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BOOKS RECOMMENDED FOR UNIT VII TN PAPERS I AND II

- 1. Edward Albeft - A History of English Literature
- 2. Ifor Evans - A short History of English Literature.
- 3. Hudson - An Outline History of English Literatur
- 4 B. Prasad - A Background Study of English Literature.

CREDIT & PERIOD DETAILS

S.No.	Unit	Periods	Credit(Point)
1	2	15	1.0
2	3	15	1.0
3	4	15	1.0
4	5	10	0.67
5	6	11	0.73
6	7	09	0.60
		75	5.00


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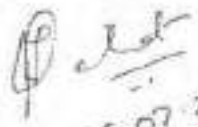
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B.A. part I
English Literature
Paper -II (Literature in English : 1750-1900)
Course outcome


After completing the Course the students will able to demonstrate: -

- Co 01- a Comprehensive knowledge of the literary works in English produced by British writers this knowledge will include the various literary forms fictional as well as non- fictional employed by the British writers and Historical and Literary topics as well.
- Co 02- a critical understanding of the poets like Blake, Wordsworth, Coleridge, Shelley, Keats, Tennyson and Browning and non fictional writers like Lamb and Hazlit and the novelists like Jane Austen and Charles Dickens.
- Co 03- a capacity to compare and contrast the different literary qualities of the writers with the critically rank them in evaluative terms.
- Co 04- a critical inclination to read literature as a socio-cultural document.
- Co 05- a research tendency to go for innovative studies like English Literature in the postcolonial light of the latest research insights.
- Co 06- a socio- political sense of responsibility to stand up against colonizing human tendencies.
- Co 07- avisible literary- critical bent towards understanding life through literature .

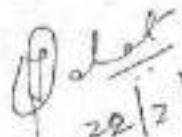

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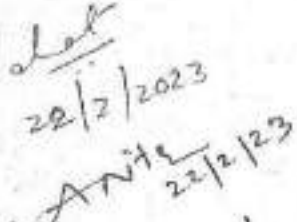

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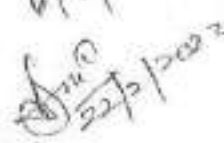

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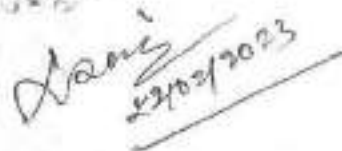

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SYLLABUS: ECONOMICS

PART-A, INTRODUCTION			
PROGRAM: Certificate	CLASS: B.A. 1 st Year	YEAR:2024	SESSION:2023-24
SUBJECT: ECONOMICS			
1	PROGRAM CODE:	A1-ECO-CER	
2	COURSE CODE:	A1-ECO-CER-DSC-1	
3	COURSE TITLE:	PRINCIPLES OF MICRO ECONOMICS (Core Course)	
4	COURSE LEARNING OUTCOME:	<p>Student after passing this course will understand rational behavior of microeconomics. Students will know about the production process. Along with it, they will also be able to explain the markets and their compositions. The students will have knowledge of welfare, which is a pivot to equality and justice.</p> <p>Study of Microeconomics helps the students to know and judge the basics of buying and selling and product pricing.</p>	
5	TOTAL MARKS=100	MAX MARKS: 100	MIN PASS MARKS:34
PART-B, CONTENT OF THE COURSE			
UNIT	TOPICS		
UNIT I- Introduction of Economics	<ol style="list-style-type: none"> 1. Definition, Nature and Scope of Economics, 2. Utility analysis- Cardinal and Ordinal approach 3. Indifference curve analysis 4. Consumer's Equilibrium & consumer surplus 5. Law of demand, Elasticity of demand. 6. Demand and supply relationship 		
UNIT II- Production	<ol style="list-style-type: none"> 1. Theory of Production 2. Law of variable proportion 3. Production function 4. Economies of scale 5. Iso Productive curves 6. MRTS 7. Returns to scale 8. Cost and revenue concepts 9. Equilibrium of the firm. 		
UNIT III- Market and Price determination	<ol style="list-style-type: none"> 1. Meaning of various markets 2. Perfect competition and price output determination 3. Monopoly and price- output determination 4. Monopolistic competition and price-output determination 		
UNIT IV- Theory of factor pricing	<ol style="list-style-type: none"> 1. Marginal productivity theory of distribution 2. Wage theories 3. Rent theories 4. Interest theories 5. Profit theories 		

UNIT V- Welfare Economics	1. Concept of welfare economics 2. Value Judgment 3. Pigou's welfare economics 4. Pareto's Optimum Theory.	
PART-C, LEARNING RESOURCES (BOOKS RECOMMENDED)		
AUTHOR	TITLE	PUBLISHER
Jhingan, M.L.	Micro Economic Theories (Hindi & English)	Vrinda Publications
Ahuja, H.L.	Principles of Micro Economics (Hindi & English)	S Chand & Co
Seth, M.L.	Micro Economics (Hindi & English)	L.N Agrawal
Koutsoyiannis, A.	Modern Micro Economics	Mcmillan
Dhingra, I. C., V. K. Garg	Principles of Micro Economics	Sultan Chand & Sons
Bose, D., A. Marimuthu	An Introduction to Micro Economics	Himalaya Publishing House
Vengedasalam, Deviga, Karunakaran Madhavan	Principles of Economics	Oxford University Press
सिन्हा, बी.सी., पुष्पा सिन्हा	व्यष्टि अर्थशास्त्र	SBPD
पंत जे.सी. एवं मिश्रा	सूक्ष्म अर्थशास्त्र	साहित्य भवन
जैन, के. पी.	आधुनिक माइक्रो अर्थशास्त्र	रतन प्रकाशन मंदिर
SUGGESTED DIGITAL PLATFORM		
1	https://www.swayamprabha.gov.in/index.php	
2	https://vidyamitra.inflibnet.ac.in/index.php	
3	https://epgp.inflibnet.ac.in/Home/ViewSubject	
PART-D ASSESSMENT & EVALUATION		
Recommended Continuous Evaluation Methods: Maximum Marks: 100 University Exam (UE):100 marks		
Internal Assessment: Continuous Comprehensive Evaluation (CCE):NIL	Class Test Assignment/Presentation	0 Marks 0 Marks
External Assessment: University Exam Section:100 Time: 3 hrs.	10 questions (02 from each unit). Attempt one question from each unit.	20 marks each

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SYLLABUS: ECONOMICS

PART-A INTRODUCTION			
PROGRAM: CERTIFICATE	CLASS: B.A. 1 st year	YEAR: 2024	SESSION: 2023-24
SUBJECT: ECONOMICS			
1.	PROGRAM CODE	A1-ECO-CER	
2.	COURSE CODE	A1-ECO-CER-DSC-2	
3.	COURSE TITLE	INDIAN ECONOMY(Core Course)	
4.	COURSE LEARNING OUTCOME	<ul style="list-style-type: none"> The students learn about the state of Indian economy pre and post-independence. The students learn about the planning process and its achievements in Indian economy. The students come across with the new economic reforms introduced in Indian economy in the year 1991 and its role in India's development. The students will come to know about some social problems like overpopulation, education, health & malnutrition, poverty, unemployment etc. The students learn the problems and prospects of agriculture sector in India. The students learn various aspects of industrial development and reforms process in the industrial economy. The students learn the role of foreign trade on Indian economy. They will also learn various aspects of foreign trade in India. The students learn the state income of Chhattisgarh in the form of GSDP, Per capita income, sectorial contribution etc. The students also learn about the importance of agriculture in Chhattisgarh's economy. The students learn about various crops their production and productivity. The students learn about various industries and infrastructure facilities in Chhattisgarh. 	
5.	TOTAL MARKS: =100	MAXIMUM MARKS: 100	MINIMUM PASSING MARKS: 34
PART B- CONTENT OF COURSE			
UNIT	TOPICS		
UNIT-I AN INTRODUCTION TO INDIAN ECONOMY	<ol style="list-style-type: none"> 1. INDIAN ECONOMY AT THE TIME OF INDEPENDENCE 2. POST INDEPENDENCE INDIAN ECONOMY 3. DEVELOPMENT THROUGH FIVE YEAR PLANS 4. NITI AAYOG 5. NEW ECONOMIC REFORMS 6. IMPACT OF NEW ECONOMIC REFORMS IN ECONOMIC DEVELOPMENT 		

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UNIT-II DEMOGRAPHY	<ol style="list-style-type: none"> 1. DEMOGRAPHIC TRENDS OF INDIA 2. ISSUES OF EDUCATION, HEALTH, MALNUTRITION AND MIGRATION , POVERTY AND INEQUALITY 3. UNEMPLOYMENT & OCCUPATIONAL DISTRIBUTION 4. MUDRA YOJANA 5. INTERNATIONAL COMPARISON IN POVERTY & HUMAN DEVELOPMENT 	
UNIT-III AGRICULTURE	<ol style="list-style-type: none"> 1. NATURE & IMPORTANCE OF AGRICULTURE 2. AGRICULTURE PRODUCTION & PRODUCTIVITY 3. MAJOR PROBLEMS IN INDIAN AGRICULTURE 4. LAND USE PATTERN & LAND REFORMS 5. NEW AGRICULTURE STRATIGIES & GREEN REVOLUTION 6. RURAL CREDIT 7. AGRICULTURE MARKETING 	
UNIT-IV INDUSTRY & FOREIGN TRADE	<ol style="list-style-type: none"> 1. INDUSTRIAL GROWTH & PRODUCTIVITY 2. INDUSTRIAL POLICY & ECONOMIC REFORMS 3. MICRO, SMALL & MEDIUM INDUSTRIES (MSME) 4. PROBLEMS OF SMALL SCALE INDUSTRIES 5. PUBLIC ENTERPRIZES IN INDIA 6. ROLE OF FOREIGN TRADE IN INDIA'S DEVELOPMENT 7. TRENDS OF IMPORT & EXPORT 8. DIRECTION & COMPOSITION OF INDIA'S FOREIGN TRADE 	
UNIT-V CHHATTISGARH'S ECONOMY	<ol style="list-style-type: none"> 1. GROSS STATE DOMESTIC PRODUCT OF CG, PER CAPITA INCOME, SECTORAL CONTRIBUTION IN GSDP 2. AGRICULTURE IN CHHATTISGARH: IMPORTANT CROP, AGRICULTURE PRODUCTION & PRODUCTIVITY, LAND USE, IRRIGATION FACILITIES, LAND HOLDING 3. INDUSTRY IN CHHATTISGARH: MAJOR INDUSTRIES, INDUSTRIAL PROGRESS, DEVELOPMENT PROSPECTS OF MINERAL BASED INDUSTRIES IN CG. 4. INFRASTRUCTURE IN CHHATTISGARH:ENERGY, TRANSPORTATION AND COMMUNICATION 	

PART C: LEARNING RESOURCES (BOOKS RECOMMENDED)

AUTHOR	TITLE	PUBLISHER
Uma Kapila	India Economy: Performance & Policies	Academic Foundation
Datt, Rudder & K.P.M. Sundharam	Indian Economy	S. Chand & Co. new Delhi
Mishra & Puri	Indian Economy	Himalaya Publishing House

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 Mishra & Puri
 K. P. M. Sundharam
 R. D. Datt
 K. P. M. Sundharam
 Mishra & Puri
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Program: B.A./B.Sc.	Class: I Year.	Session : 2023-24
Paper I: Physical Geography (UGeo-0101)		
Course Learning Outcome (CLO)	After the completion of course, the students will have ability to:	
	<ol style="list-style-type: none"> 1. Understand the internal structure of the earth, rocks that compose it and forces within the earth that act to deform it. 2. Analyze how the natural and anthropogenic operating factors affect the development of land forms. 3. Understand about the denudation processes that unceasingly act at the earth's surface to shape land forms and reduce relief. 4. Assess the role of structure, stage and time in shaping the land forms. 5. Identify the Atmospheric pressure, winds humidity, concept of precipitation, its types and understand the Air Masses and Fronts and the Weather Forecasting. 6. Identify the relief of the ocean bottom, temperature, salinity of ocean water, tide, currents coral reef and oceanic resources. 	
Content of the Course		
Unit	Topic	
1.	Origin of the Earth, Geological Time Scale, Earth's Interior, Continental Drift Theory (Wegner), Plate Tectonics, Isostasy.	
2.	Earth movements: Earthquakes and Volcanoes, Rocks, Weathering, Erosion and Normal cycle of erosion, Evolution of landscapes: Fluvial, Aeolian (Arid and Semi Arid), Glacial, Karst.	
3.	Elements of Weather and Climate, Composition and Structure of the Atmosphere. World patterns of Atmospheric Temperature, Pressure, and Winds.	
4.	Atmospheric Humidity and Disturbances, Climatic Classification of Koppen, Geographical account of world climate patterns: Equatorial, Monsoon, Desert and Tundra.	
5.	Bottom relief of Ocean, Distribution of Temperature and Salinity of Oceans and Seas, Currents and Tides, Ocean Deposition. Law of the Sea.	
Learning Resources: Text Books, Reference Books, Other Resources		
Suggested Readings:		
<ol style="list-style-type: none"> 1. Ahamed, E.: Coastal Geomorphology of India. 2. Chorley, R. J.: Spatial Analysis in Geomorphology, Methuen, London, 1972. 3. Dayal, P. : A Text book of Geomorphology, R.K. Books, New Delhi. 4. Gautam, Alka : Geomorphology, Sharda Pustak Bhawan, Allahabad. 5. Holms, A.: Principles of Physical Geology, Thomas Nelson, London. 6. Jha, V.C. : Geomorphology, Vasundhara Publication, Gorakhpur. 7. Sparks, B.W. Geomorphology, Longman, London, 1960. 8. Sharma, H.S. (ed.): Perspective in Geomorphology, Concept, New Delhi, 1980. 9. Singh, S : Geomorphology, Prayag Publication, Allahabad, 1998. 10. Steers, J.A. : The Unstable Earth Methuen, London. 11. Thornbury, W.I.). Principles of Geomorphology, John Wiloy, New York, 1960. 12. Strahler, A.N.: Physical Geography, Willey, New York. 13. सिंह.एम.बी.(2001) : भौतिक भूगोल, तारा बुक ऐजेन्सी, वाराणसी। 14. सिंह, सविन्द्र (2016) : भौतिक भूगोल, प्रयाग पुस्तक भवन, इलाहाबाद। 15. दयाल, परमे वर (2012) : भौतिक भूगोल, पंच तिल प्रकाश एन, जयपुर। 16. हुसैन, नाजिद (2009) : भौतिक भूगोल, रावत पब्लिके एन, जयपुर। 		
Suggested equivalent online course: 1. cpgp.inflibnet.ac.in 2. virtual lectures available on youtube		

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Program: B.A./B.Sc.		Class: I Year.	Session : 2023-24
Paper II: Human Geography (UGeo-0102)			
Course Learning Outcome (CLO)	After the completion of course, the students will have ability to:		
	<ol style="list-style-type: none"> 1. Discuss and describe the major concepts and key principles of Human Geography including place, space, scale and landscape. 2. Appreciate the diversity of the cultural backgrounds and places. 3. Problem solving from a geographic perspective by understanding the role location plays. 		
Content of the Course			
Unit	Topic		
1.	Meaning, Definition, Nature and Scope of Human Geography, Man - environment relationship: Determinism, Possibilism, Determinism, Neo-Determinism and Probabilism; Human Development Index (HDI).		
2.	Human Races: Formation and Evolution, Characteristics, Classification and Distribution. Human adaptation to environment: Eskimos, Bushman, Pigmy and Masai.		
3.	Growth, Density and Distribution of World Population and factors influencing spatial distribution. Over, Under, and Optimum Population; Migration of Population.		
4.	Rural Settlements: Characteristics, Types and Regional Pattern, Rural Houses in India, Urban Settlement- Types and Pattern.		
5.	Environmental Issues: Global Warming, Climate Change, Acid rain, Deforestation, Desertification, Air, Water and Soil Pollution.		
Learning Resources :Text Books, Reference Books, Other Resources			
Suggested Readings:			
<ol style="list-style-type: none"> 1. Chisholm, M. (1985): Human Geography, 2nd edition, Penguin Books, London. 2. De Blij, H.J.(1996): Human Geography: Culture, Society and Space,. 2nd edition. John Wiley and Sons, New York, 3. Fellman, J. D., Arthur, G., Judith, G., Hopkins, J. and Dan, S. (2007): Human Geography: Landscapes of Human Activities. McGraw-Hill, New York. 10th edition. 4. Haggett, P. (2004): Geography: A Modern Synthesis. 8th edition, Harper and Row, New York. 5. Huggett, R. J. (1998): Fundamentals of Biogeography, Routledge, London. 6. Hussain, M. (1994): Human Geography, Rawat Publications, Jaipur. 7. Johnston, R. J., Gregory, D., Pratt, G. and Watts, M. (2009): The Dictionary of Human Geography. 5th edition, Basil Blackwell Publishers, Oxford. 8. Norton, W. (2008): Human Geography, Oxford University Press, New York. 5th ed. 9. Singh, K. N. and Singh, J. (2001): <i>Manav Bhugol</i>. Gyanodaya Prakashan, Gorakhpur. 2nd edition. 10. Singh, L.R. (2005): Fundamentals of Human Geography, Sharda Pustak Bhawan, Allahabad 11. Smith, D. M.(1977): Human Geography- A Welfare Approach, Edward Arnold (Publishers) Ltd., London 			
Suggested equivalent online course: eppg.inflibnet.ac.in 2. virtual lectures available on YouTube			

Head Exam Supervisor

(A. Chakraborty)

Program: B.A./B.Sc.		Class: 1 Year.	Session : 2023-24
Paper III : Practical Geography (UGeo-0103)			
Course Learning Outcome (CLO)	After the completion of course, the students will have ability to: 1. Develop hands on skills in diagrammatic representation of data. 2. Comprehend thematic mapping techniques, its cartographic representation and interpretation. 3. Take up Cartography as a profession.		
Content of the Course			
Unit	Topic		
Section A: Cartography And Statistical Methods			MM- 25
1.	Basic concept of Latitude and Longitude. Identification of tropic of Cancer, Capricorn and equator on map, name of country and state. Northern hemisphere and southern hemisphere. Practice on world and India map.		
2.	Scale: Statement Scale, Representative Fraction (R.F.), Linear scale – Simple, Diagonal, Comparative, and Time Scales.		
3.	Methods of showing relief; Meaning of contour, basic features of Contours line, Hachures; Representation of different landforms by Contours; Conical hill, Plateau, V and U shape valley, Waterfall.		
4.	Graphs and Diagram: Triangular graph, Bar Diagram (Simple and Composite and multiple), Circle Diagram, Pie Diagram.		
5.	Statistical Technique: Mean Median, Mode		
Section B: Surveying			MM-15
6.	Chain and Tape Survey. Triangulation method, Open Traverse and Closed Traverse		
Section C: Practical Record And Viva Voce			MM-10
Learning Resources: Text Books, Reference Books, Other Resources			
Suggested Readings:			
1. Davis, R.E. and Foote, F.S. (1953): Surveying, 4 th edition, McGraw Hill Publication, New York			
2. Jones, P.A.(1968): Fieldwork in Geography, Longmans, Green and Company Ltd., First Publication, London			
3. Monkhouse, F. J. and Wilkinson, F.J. (1985): Maps and Diagrams. Methuen, London			
4. Natrajan, V. (1976): Advanced Surveying, B.I. Publications., Mumbai			
5. Raisz, E. (1962): General Cartography. John Wiley and Sons, New York. 5 th edition.			
6. Sarkar, A. K. (1997): Practical Geography: A Systematic Approach. Orient Longman, Kolkata.			
7. Singh, R.L. and Singh, Rana P.B. (1993): Elements of Practical Geography. (Hindi and English editions). Kalyani Publishers, New Delhi.			
8. Singh, L.R. (2006): Fundamentals of Practical Geography, Sharda Pustak Bhawan, Allahabad.			
9. Venkatramiah, C. (1997): A Text Book of Surveying, Universities Press, Hyderabad.			
10. वर्मा, जे.पी. (2001) : प्रायोगिक भूगोल, रस्तोगी पब्लिकेशन, मेदूर			
11. मिश्रा, आर.एन.एवं पी.के.वर्मा (2019) : प्रायोगिक भूगोल, रावत पब्लिकेशन, जयपुर			
12. तिवारी, आर.सी.एवं सुधाकर त्रिपाठी (2009) : अभिनव प्रायोगात्मक भूगोल, प्रयाग पुस्तक भवन			
13. मोंक हाऊस तथा विल्किन्सन (अनुवाद प्रो. प्रेमचन्द्र अग्रवाल) : मानचित्र तथा आरेख, मध्यप्रदेश हिंदी इलाहाबाद ग्रंथ अकादमी गोपाल			
Suggested equivalent online course:			
1. eggp.inflibnet.ac.in 2. virtual lectures available on you tube			

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(Dr. Sheela Shinde)

SOCIOLOGY
B.A. PART-I
Paper - I
INTRODUCTION TO SOCIOLOGY
(Paper Code - SO-105)

Maxi. Marks- 75

- UNIT-I **Sociology:** Meaning, Nature, Scope, Subject Matter and Significance.
Basic concept: Society, Community, institution, Association, group, Status and role.
- UNIT-II **Social Institutions:** Family, Marriage and Kinship.
Culture and Society: Culture, Socialization, The individual and society, social control, norms, values.
- UNIT-III **Social Stratification:** Mobility - Meaning forms and theories.
Social Mobility: Meaning forms and theories.
- UNIT-IV **Social change:** Meaning and Pattern, types, factors, evolution and progress.
- UNIT-V **Social Systems and Processes:** Social System - Meaning, characteristics and elements.
Social process: Meaning, elements, characteristics and types.

Recommended Books:

- 1 Bottomore T.B., Sociology- A guide to Problems and Literature, Bombay, George Allen and unwin(India) 1972.
- 2 Inkeles, Alex, What is Sociology ? New Delhi, Prentice Hall of India 1987.
- 3 Jayram, N- Introductory Sociology, Madras MaCmillan India 1988.
- 4 Johnson Harry, M., Sociology of systematic Introduction New Delhi Allied Publishers 1995.

Ayathak
22.2.23

Sharma

Sudhakar

22.2.23
Dr. Preeti Mishra

Dr. P. P. P. P.
Dr. P. P. P. P.

Deep
22.2/23

22.02.2023
(Dr. Nitesh Kojhar)

N. S. E. K. R. A.
22.02.2023
(N.S.E.K.R.A.)

SOCIOLOGY
B.A. PART-I
PAPER-II
CONTEMPORARY INDIAN SOCIETY
(Paper Code- SO-106)

Maxi. Marks- 75

- UNIT-I Classical View about Indian Society :** Varna, Ashram, Karma, Dharmta and Purusharth
- UNIT-II The Structure and composition of Indian Society.**
Structure: Village, Towns, Cities and Rural – Urban Linkage,
Compositions: Tribes, Dalits, Women and Minorities.
- UNIT-III Basic Institutions of Indian Society**
Caste system, Joint Family, Marriage and Changing dimensions.
- UNIT-IV Familial Problems:** Dowry, Domestic violence, Divorce, Intra-intergenerational conflict, problem of elderly.
- UNIT-V Folk Culture of Chhattisgarh-** A. Customs, B. Traditions, C. Food Habits and D. Festivals

Recommended Books:

1. Dube, S.C. 1995. Society in India, New Delhi: National Book Trust.
2. Mandelbaum, D.G. 1970. Society in India, Bombay : Popular Prakashan.
3. Shrinivas, M.N. 1973. Social Change in Modern India, California : University of California Press.
4. Shrinivas, M.N. 1973. Social Change Structure, New Delhi : Hindustan Publishing Corporation.
5. Uberoi Patricia. 1993. Family and Marriage in India, New Delhi : Oxford University press.

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Dr. Praetish
Dr. D. P. Singh

Dr. D. P. Singh
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Dr. D. P. Singh
Dr. D. P. Singh
(N. S. L. K. A. T.)

Abeda Begum, head of the department . Govt . Kamia devi rathi Girls PG College
Rajnandgaon

Head Board of Studies political science hemchand Yadav University.

Head Board of Studies political science Atal Bihari Vajpayee University Bilaspur
Chhattisgarh .

Head Board of Studies political science Shahid Mahendra Karma University
Jagdalpur Chhattisgarh .

Head Board of Studies political science Sant gahira Guru University Ambikapur
Surguja.

Chhattisgarh head of the department political science government EV PG College
Korba Chhattisgarh.

Head department political science Government Girls PG College Ambikapur.
Chhattisgarh.

Head of the department political science Government Girls College Jagdalpur
Chhattisgarh .

Head of the department of political science PG College Surajpur Chhattisgarh.

Professor Anupam Sharma head of the department political science Indira Gandhi
tribal University Amarkentak Madhya Pradesh.

Dr. Kamlesh Dube political science Government PG College ramanujanj.

Mrs Anamika Jha assistant professor political science government Kakatiya PG
College Jagdalpur Chhattisgarh.

Dr D S Jagat joint director Higher Education Department new Raipur Chhattisgarh.

Business transacted :

1. Members of the Central Board of Studies for Political Science prepared the
Syllabus of B.A. The Political Science program consists of three year annual
undergraduate program which includes.

B.A - Bachelor of arts

Syllabus is as per the notifications 969/academic/2023/ dated 11/1/23 and
971/academic/2023/ dated 11/1/23 / of the university.

2. first year students shall have

- Paper 1st :- Political theory राजनीतिक सिद्धान्त
- Paper 2nd - Indian government and politics भारतीय शासन एवं राजनीति

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3- second year students shall have

- Paper 1st :- Political thought राजनीतिक चिन्तन
- Paper 2nd - Comparative government and politics भारतीय शासन एवं राजनीति तुलनात्मक

4- Third year students shall have

- Paper 1st :- International Politics and foreign policy of India अन्तर्राष्ट्रीय राजनीति एवं भारत की विदेश नीति
- Paper 2nd - Public Administration लोक प्रशासन

बी. ए. प्रथम, प्रश्न पत्र प्रथम B. A. First Paper 1st पूर्णांक 75

राजनीतिक सिद्धान्त Political Theory
COURSE OUTCOMES

Theory is the starting point of any social sciences that is why political theory is almost universal in BA part one syllabus of political science. Therefore it is pertinent to make students acquainted with proposed course to the students with fundamental theories of political science. Basic Knowledge of important concepts such as Liberty, Justice, Citizenship, Representation, rule of law, Role of political theory to understand political science and political life as well.

COURSE SPECIFIC OUTCOMES	
	After completion of the course, the student shall have a fair idea about
CSO 1	The meaning of nature and scope and scientific instinct of political science .
CSO 2	The state as a core concept of political science . Its evolution theories and relation with individuals .
CSO 3	The role of liberty and the question of equality in democracy . Evolution of democracy and its theories .
CSO 4	The concept of constitution, separation of powers and theory of representation.
CSO 5	The functional machinery of electoral democracy like political party system and pressure groups. Role of State as welfare agency , and as an agency of social change .

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इकाई 1

राजनीति विज्ञान का अर्थ परिभाषाएं - पारम्परिक एवं आधुनिक, अध्ययन का महत्व । शक्ति, सत्ता - अर्थ, विशेषताएं प्रकार वैधता- अवधारणा, शक्ति सत्ता एवं वैधता का सम्बन्ध । राजनीति विज्ञान की अध्ययन पद्धतियां - परम्परागत एवं आधुनिक । व्यवहारवाद एवं उतर व्यवहारवाद ।

Unit 1

Meaning definitions of political science - traditional and modern, importance of the study of political science. Power, Authority - meaning, characteristics, types. Legitimacy - concept, relationship of power, authority and legitimacy. Study methods of political science Traditional and modern. Behaviouralism and post-behaviouralism.

इकाई 2

राज्य : अवधारणा, राज्य का विकास, आवश्यक तत्व । राज्योत्पत्ति के विभिन्न सिद्धान्त, राज्य के सिद्धान्त मार्क्सवादी सिद्धान्त उदारवादी, नव उदारवादी, बहुलवादी, नारीवादी, । राज्य की भूमिका - लोक कल्याणकारी राज्य ।

Unit 2

State: Concept, Development of State, Essential Elements. Various theories of state origin, Theories of state, Marxist, liberal, neo-liberal, pluralist, feminist. Role of the state - Public welfare state.

इकाई 3

सम्प्रभुता : अर्थ, परिभाषा, विशेषताएं, सम्प्रभुता के सिद्धान्त : एकलवादी एवं बहुलवादी । बहुलवाद - अर्थ विशेषताएं । अधिकार : अर्थ, प्रकार, सिद्धान्त । कर्तव्य । स्वतन्त्रता : अर्थ प्रकार, स्वतंत्रता का सकारात्मक एवं नकारात्मक सिद्धान्त । समानता : अर्थ, प्रकार एवं स्वतन्त्रता से सम्बंध । प्रजातन्त्र : अर्थ, परिभाषाएं प्रजातंत्र के सिद्धान्त, सफलता के लिए आवश्यक दशाएं, । प्रजातंत्र के समक्ष प्रमुख चुनौतियां । गुण-दोष । प्रत्यक्ष प्रजातन्त्र ।

Unit 3

Sovereignty: Meaning, Definition, Characteristics, Principles of Sovereignty: Legal or Monistic and Pluralist. Pluralism : Meaning, Features. Rights : Meaning, types major Theories, Duties. Freedom: Meaning Types, Positive and Negative Theory of Freedom. Equality : Meaning type and relation to freedom. Democracy : Meaning definitions Principles of democracy. Necessary conditions for the success of Democracy. Major challenges before democracy. Merits and demerits. Direct democracy.

इकाई 4

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शासन के प्रकार एकात्मक व संघात्मक संसदीय व अध्यक्षतात्मक, तानाशाही । शासन के अंग कार्यपालिका, व्यवस्थापिका न्यायपालिका शक्ति पृथक्करण का सिद्धान्त व नियंत्रण संतुलन का सिद्धान्त । संविधान अर्थ एवं प्रकार प्रतिनिधित्व के सिद्धान्त एवं निर्वाचन प्रणालियां । फासीवाद, सर्वसत्तावाद ।

Unit 4

Forms of Government: Unitary and Federal, Parliamentary and Presidential, Dictatorship. Organs of Government: Legislature, Executive and Judiciary. Theory of Separation of Powers and Checks and Balances. Constitution: meaning and kinds. Theories of representation and Electoral Process. Fascism, Totalitarianism .

इकाई 5

लोककल्याणकारी राज्य । दल पद्धति अर्थ प्रकार, प्रमुख सिद्धान्त , गुंण दोष। दबाव समूह अर्थ प्रकार तकनीक । सामाजिक परिवर्तन : अर्थ, विशेषताएं प्रमुख सिद्धान्त । नारीवाद - अवधारणा, प्रमुख दृष्टिकोण । राष्ट्रवाद : अवधारणा, प्रमुख आयाम ।

Unit 5

Public Welfare State. Party System: meaning, kinds, major theories, merits and demerits. Pressure Groups: meaning, kinds and technique. Social Change : meaning, characteristics, theories. Feminis. Concept, main approaches to feminism. Nationalism: concept, major dimensions .

Suggested readings

1. M.P. Jain (1985) Political Theory, Liberal and Marxian, Authors Guild Publications, Delhi.
2. S.P. Verma (1992) Modern Political Theory, Vikas Publishing House, Pvt. Ltd., New Delhi.
3. R.C. Vermani (1997) An Introduction to Political Theory, Gitanjali Publishing House, New Delhi.
4. Rajeev Bhargava and Ashok Acharya (eds) (2017) Political Theory: An Introduction, Pearson, New Delhi.
5. C. McKinnon (ed.) (2008) Issues in Political Theory Oxford University Press, New York.
6. A. Swift (2001) Political Philosophy: A Beginners Guide for Students and Politicians, Cambridge Press.
7. R. Dahl, I. Shapiro and A.J. Cheibub (eds.) (2003) The Democracy SourceBook, Massachusetts: MIT Press, Cambridge.
8. O.P. Gauba (2014) An Introduction to Political Theory, MacMillan Publishers, Delhi.
9. Andrew Heywood (2015) Political Theory: An Introduction, Palgrave Macmillan, London.

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REVISED ORDINANCE NO.11

(As per State U.G.C. Scheme)

BACHELOR OF ARTS

1. The three year course have been broken up into three Parts.
Part-I Examination : at the end of the first year.
Part-II Examination : at the end of the second year and
Part-III Examination : at the end of the third year.
2. A candidate who after passing (10+2) or Intermediate Examination of C.G. Board of Secondary Education, Raipur or any other examination recognised by the University or C.G. Board of Secondary Education as equivalent thereto, has attended a regular course of study in an affiliated college or in the Teaching Department of the University for one academic year shall be eligible for appearing at the B.A. Part-I examination.
3. A candidate who after passing B.A. Part-I examination of the University or any other examination recognised by the University as equivalent thereto has attended a regular course of study for one academic year in an affiliated college or in the Teaching Department of the University shall be eligible for appearing at the B.A. Part II Examination.
4. A candidate who after passing B.A. Part II examination of the University has completed a regular course of study for one academic year in an affiliated college or in the Teaching Department of the University shall be eligible for appearing at the B.A. Part-III examination.
5. Besides regular students, subject to their compliance with this ordinance, ex-students and non-collegiate candidates shall be eligible for admission to the examination as per provisions of Ordinance N. 6 relating to Examinations (General). Provided that non-collegiate candidates shall be permitted to offer only such subjects/papers as are taught to the regular students at any of the University Teaching Department or College.

6. Every candidate for the Bachelor of arts examination shall be examined in :
- A. Foundation Course:
- I - Group - Hindi Language
 - II - Group - English Language
- B. Three Course subjects : One subject from any three groups out of the following six groups :
1. Sociology/Ancient Indian History Culture and Anthropology.
 2. Political Science/Home Science / Drawing & Painting / Vocational Course.
 3. Hindi Literature/Sanskrit Literature /Urdu Literature/Mathematics
 4. Economics/Music/Defence studies / Linguistics.
 5. Philosophy/Psychology/Geography/Education/Management.
 6. History/English Literature/Statistics.
 7. Practicals (if necessary) for each core subject.
7. Any candidate who has passed the B.A. examination of the University shall be allowed to present himself for examination in any of additional subjects prescribed for the B.A. examination and not taken by him at the degree examination. Such candidate will have to first appear and pass the B.A. Part I examination in the subject which he proposes to offer and then the B.A. Part II and Part III examination in the same subject. Successful candidate will be given a certificate to that effect.
8. In order to pass at any part of the three year degree course examination, an examinee must obtain not less than 33% of the total marks in each subject/group of subjects. In subject/group of subjects, where both theory and practical examination are provided, an examinee must pass in both theory and practical parts of the examination separately.
9. Candidate will have to pass separately at the Part-I, Part II and part-III examination. No division shall be assigned on the result of the Part-I and Part-II examination. In determining the division of the Final examination, total marks obtained by the examinees, in their Part-I, Part-II and Part-III examination in the aggregate shall be taken into account. Candidate will not be allowed to change subjects after passing Part I Examination.

Provided in case of candidate who has passed the examination through the supplementary examination having failed in one subject only the total aggregate marks being carried over for determining the division shall include the actual marks obtained in the subject in which he appeared at the supplementary examination.

10. Successful examinees at the Part-III examination obtaining 60% or more marks shall be placed in the First division, those obtaining less than 60% but not less than 45% marks in the Second division and other successful examinees in the third division.

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SCHEME OF EXAMINATION

Subject	Paper	Max. Marks	Min. Marks
i) Environmental Studies		75	
Field Work		25	33
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A. Foundation Course			
i) Hindi Language - I		75	26
ii) English Language - II		75	26
B. Three Core Subject :			
1. Hindi Literature	I	75	
	II	75	50
2. Sanskrit Literature	I	75	
	II	75	50
3. English Literature	I	75	
			50
	II	75	
4. Philosophy	I	75	
			50
	II	75	
5. Economics	I	75	
			50
	II	75	
6. Political Science	I	75	
	II	75	50
7. History	I	75	
	II	75	50
8. Ancient Indian History	I	75	
Culture & Archaeology	II	75	50
9. Sociology	I	75	
	II	75	50
10. Geography	I	50	
			33
	II	50	
	Practical	50	17
11. Mathematics	I	50	
	II	50	50
	III	50	
12. Statistics	I	50	
	II	50	33
	Practical	50	17
13. Anthropology	I	50	
			33
	II	50	
	Practical	50	17

14. Linguistics	I	75	50
	II	75	
15. Indian Music	I	50	33
	II	50	
	Practical	50	17
16. Home Science	I	50	33
	II	50	
	Practical	50	17
17. Education	I	75	50
	II	75	
18. Psychology	I	50	33
	II	50	
	Practical	50	17
19. Management	I	75	50
	II	75	
20. Defence Studies	I	50	33
	II	50	
	Practical	50	17
21. Urdu	I	75	50
	II	75	
22. Dance	I	50	33
	II	50	
	Practical	50	17
23. Vocational Course	I	50	33
	II	50	
	Practical	50	17

USE OF CALCULATORS

The Students of Degree/P.G. Classes will be permitted to use of Calculators in the examination hall from annual 1986 examination on the following conditions as per decision of the standing committee of the Academic Council at its meeting held on 31-1-1986-

1. Student will bring their own Calculators.
2. Calculators will not be provided either by the university or examination centres.
3. Calculators with, memory and following variables be permitted +, -, x, $\frac{1}{x}$, square, reciprocal, exponents, log, square root, trigonometric functions, sine, cosine, tangent etc. factorial summation, xy, yx and in the light of objective approval of merits and demerits of the viva only will be allowed.

संशोधित पाठ्यक्रम
बी.ए./बी.एस-सी./बी.कॉम./बी.एच.एस.-सी.
भाग - दो, आधार पाठ्यक्रम
प्रश्न पत्र - प्रथम (हिन्दी भाषा) (पेपर कोड - 0171)

पूर्णांक- 75

खण्ड - क	निम्नलिखित 5 लेखकों के पाठ शामिल होंगे -	अंक-35
	1. महात्मा गांधी - चोरी और प्रायश्चित	
	2. आचार्य नरेंद्र देव - युवकों का समाज में स्थान	
	3. वासुदेव शरण अग्रवाल - मातृभूमि	
	4. हरि ठाकुर - डॉ. खूबचंद बघेल	
	5. पं. माधवराव सप्रे - सम्भाषण-कुशलता	
खण्ड-ख	हिन्दी भाषा और उसके विविध रूप	अंक-16
	1. कार्यालयीन भाषा	
	2. मीडिया की भाषा	
	3. वित्त एवं वाणिज्य की भाषा	
	4. मशीनी भाषा	
खण्ड-ग	हिन्दी की व्याकरणिक कोटियाँ	अंक-24
	संज्ञा, सर्वनाम, विशेषण, क्रिया विशेषण, समास, संधि एवं संक्षिप्तियाँ अनुवाद व्यवहार : अंग्रेजी से हिन्दी में अनुवाद	

इकाई विभाजन-

इकाई- 1	चोरी और प्रायश्चित : महात्मा गांधी / कार्यालयीन भाषा, मीडिया की भाषा
इकाई- 2	युवकों का समाज में स्थान : आचार्य नरेंद्र देव / वित्त एवं वाणिज्य की भाषा, मशीनी भाषा
इकाई- 3	मातृभूमि: वासुदेवशरण अग्रवाल / संज्ञा सर्वनाम, विशेषण, क्रिया विशेषण
इकाई- 4	डॉ. खूबचंद बघेल : हरि ठाकुर/समास, संधि,
इकाई- 5	सम्भाषण-कुशलता : पं. माधवराव सप्रे, / अनुवाद - अंग्रेजी से हिन्दी में अनुवाद, संक्षिप्तियाँ

मूल्यांकन योजना -

प्रत्येक इकाई से एक-एक प्रश्न पूछे जाएंगे। प्रत्येक प्रश्न में आंतरिक विकल्प होगा। प्रत्येक प्रश्न के 15 अंक होंगे। प्रत्येक इकाई को दो-दो खण्डों (क्रमशः 'क' और 'ख' में) विभक्त करते हुए निर्धारित पाठ से 8 एवं शेष पाठ्य सामग्री से 7 अंक के प्रश्न होंगे। इस प्रकार पूरे प्रश्न-पत्र के पूर्णांक 75 होंगे।

पाठ्यक्रम संशोधन का औचित्य : विद्यार्थी चर्चित एवं सुप्रसिद्ध व्यक्तियों के लेख के माध्यम से समाज एवं राष्ट्रहित के साथ-साथ व्यक्तित्व विकास विषयक मुद्दों से परिचित हो सकें तथा व्याकरणक एवं भाषा विषयक प्रस्तावित पाठ्यक्रम के माध्यम से हिन्दी भाषा संबंधित प्रयोग पक्ष से परिचित होते हुए प्रतियोगी परीक्षाओं की दृष्टि से ज्ञानार्जन कर सकें।

ENGLISH LANGUAGE (Paper Code-1132)

B.A. / B.Sc. /B.COM. /B.H. Sc. - II

M.M.75

The question paper for B.A. /B.Sc./B.Com./B.H.Sc., English Language and cultural values shall comprise the following units:

UNIT-I Short answer questions to be passed by (Five short answer questions of three marks each)	15 Marks
UNIT-II (a) Reading comprehension of an unseen passage (b) Vocabulary	05 Marks
UNIT-III Report-Writing	10 Marks
UNIT-IV Expansion of an idea	10 Marks
UNIT-V Grammar and Vocabulary based on the prescribed text book.	20+15Marks

Note: Question on all the units shall asked from the prescribed text which will Comprise Specimens of popular creative/writing and the following it any

- a Matter & technology
 - i. State of matter and its structure
 - ii. Technology (Electronics Communication, Space Science)
- b Our Scientists & Institutions
 - I. Life & work of our eminent scientist Arya Bhatt. Kaurd Charak Shusruta, Nagarjuna, J.C. Bose and C.V. Raman, S. Rmanujam, Homi J. Babha Birbal Sahani.
 - II. Indian Scientific Institutions (Ancient & Modern)

Books Prescribed:

Foundation English for U.G. Second Year - Published by M.P. Hindi Granth Academy, Bhopal.



संशोधित
बी. ए. भाग-2
हिन्दी साहित्य
प्रथम प्रश्न पत्र

अर्वाचीन हिन्दी काव्य (पेपर कोड- 0173)

पूर्णांक- 75

प्रस्तावना- आधुनिक काव्य आधुनिकता की समस्त विशेषताओं को समेटे हुए है। स्वतंत्रता प्राप्ति के पूर्व की भाव-भाषा, शिल्प, अन्तर्वस्तु सम्बन्धी समस्त विकास धारा यहां सजीव रूप में देखी जा सकती है। इसे अनदेखा करना मनुष्य की विकास यात्रा को नजर अंदाज करना है। इस यात्रा के साक्षात्कार के लिए आधुनिक काव्य का अध्ययन अपेक्षित ही नहीं अपितु अनिवार्य है।

पाठ्य विषय-

1. मैथिलीशरण गुप्त
 2. सूर्यकान्त त्रिपाठी निराला
 3. सुमित्रानंदन पंत
 4. माखन लाल चतुर्वेदी
 5. स. ही. वात्स्यायन अज्ञेय
- भारत- भारती की कविताएँ
- (1) सखि बसन्त आया।
(2) वर दे, वीणा वादिनी वर दे।
(3) हिन्दी के सुमनों के प्रति पत्र।
(4) तोड़ती- पत्थर।
(5) राजे ने अपनी रखवाली की।
- (1) बादल।
(2) परिवर्तन 2 पद (1. खोलता इधर जन्मलौचन
2. आज का दुख कल का आल्हाद)
(3) ताज।
(4) झंझा में नीम।
(5) भारत माता।
- (1) बलि पंथी से।
(2) साँझ और ढोलक की थापें।
(3) मैं बेच रही हूँ, दही।
(4) उलाहना।
(5) निःशस्त्र सेनानी।
- (1) सबेरे उठा तो धूप खिली थी।
(2) साम्राज्ञी का नैवेद्य दान।
(3) घर।
(4) चांदनी जी लो।
(5) दूर्वाचल।

द्वुतपाठ हेतु निम्न कवियों का अध्ययन किया जाएगा, जिन पर लघुउत्तरीय प्रश्न पूछे जायेंगे-

R.D.S. 5
11/02/2019
A.K.

संशोधित
बी. ए. भाग-2
हिन्दी साहित्य
द्वितीय प्रश्न पत्र

हिन्दी निबंध तथा अन्य गद्य विधाएँ (पैपर कोड- 0174)

पूर्णांक- 75

पाठ्य विषय-

व्याख्या एवं आलोचनात्मक प्रश्नों के लिए एक नाटक, पांच प्रतिनिधि निबंध और पाँच एकांकी का निर्धारण किया गया है।

नाटक- अंधेरी नगरी- भारतेन्दु हरिश्चन्द्र

निबंध-	1. क्रोध	- आचार्य रामचन्द्र शुक्ल।
	2. वसन्त	- डॉ. हजारी प्रसाद द्विवेदी।
	3. उस अमराई ने राम- राम कही है	- डॉ. विद्यानिवास मिश्र।
	4. काव्येषु नाट्यम रम्यम्	- बाबू गुलाब राय।
	5. बेईमानी की परत	- हरिशंकर परसाई
एकांकी-	1. औरंगजेब की आखिरी रात	- डॉ. रामकुमार वर्मा
	2. स्ट्राईक	- भुनेश्वर
	3. एक दिन	- लक्ष्मीनारायण मिश्र
	4. दस हजार	- उदयशंकर भट्ट
	5. मम्मी ठकुराईन	- डॉ. लक्ष्मीनारायण लाल

द्रुत पाठ के लिए तीन गद्यकारों का अध्ययन किया जायेगा, जिन पर लघुउत्तरीय प्रश्न पूछे जायेंगे।

1. राहुल सांकृत्यायन 2. महादेवी वर्मा 3. हबीब तनवीर

अंक विभाजन-	व्याख्याएं (3)	- 21 अंक
	आलोचनात्मक प्रश्न (2)	- 24 अंक
	लघुउत्तरीय प्रश्न (5)	- 15 अंक
	वस्तुनिष्ठ (15)	- 15 अंक
	कुल अंक	75 अंक

इकाई विभाजन-

इकाई- 1 व्याख्या

इकाई- 2 अंधेरी नगरी एवं क्रोध, वसन्त, उस अमराई ने राम- राम कही है।

इकाई- 3 औरंगजेब की आखिरी रात, स्ट्राईक, एक दिन, दस हजार, मम्मी ठकुराईन

इकाई- 4 द्रुतपाठ के गद्यकार- राहुल सांकृत्यायन, महादेवी वर्मा, हबीब तनवीर।

इकाई- 5 वस्तुनिष्ठ (समग्र पाठ्य विषय से)

R. S. Y. S. S.
11102
A. S.

ENGLISH LITERATURE
PAPER-I
MODERN ENGLISH LITERATURES (Paper Code-0175)

M.M. 75

All Questions are compulsory.

- Note :
1. Unit-I is compulsory. Two passages from each of the units I to V to be set and three to be attempted. (3 x 5 = 15)
 2. Short answer questions from unit VII, seven to be set and five to be attempted. (5 x 2 = 10)
 3. Long answer questions from unit II to VI. Five questions from each unit with internal choice to be set. (5 x 2 = 10)
(Words limit for each answer is 300-400 words)

UNIT-I Annotations

UNIT-II (Poetry)

W.B. Yeats - 'A Prayer for My Daughter, The Second Coming'
T.S. Eliot - 'Love Song of J. Alfred Prufrock'

UNIT-III (Poetry)

Dylan Thomas - 'Lament, 'A Refusal to Mourn the Death
Larkin - 'Toads', At Grass'

UNIT-IV (Prose)

Bertrand Russell - On the Value of Scepticism
Oscar Wilde - Happy Prince

UNIT-V (Drama)

G.B. Shaw - Pygmalion

UNIT-VI (Fiction and short-stories)

Rudyard Kipling-Kim
Short-Stories
Katherine mansfield - A Cup of Tea

- UNIT-VII**
1. Elegy,
 2. Sonnet,
 3. Ode,
 4. Morality & Miracle Play,
 5. One Act Play,
 6. Interlude

BOOKS RECOMMENDED :

1. An Introduction to the study of English Lit. B. prasad
2. A Glossart of Literary Terms - M.H. Abrahamas
3. Prose of Today - M. Millan Pub
4. Short stories of Yesterday and To day - M. Millan

Dr. M. Chakraborty

Dr. S. Gupta

DR. MERILY ROY

PAPER - II
MODERN ENGLISH LITERATURES (Paper Code-0176)

M.M. 75

All question are compulsory.

- Note :** 1. Unit I is compulsory. Two passages from each of the units II to V to be set and three to be attempted. (3x5 = 15)
2. Short answer questions from unit VII, seven to be set and five to be attempted. (5x2 = 10)
3. Long-answer questions from unit II to VI. Five questions from each unit with internal choice to be set. (5x2 = 10)
(Words limit for each answer is 300-400 words)

UNIT-I Annotation

UNIT-II (Poetry)

Sasson - At the Grove of Henry Vaughan.

Owen, W.H. - Strange Meeting

UNIT-III (Poetry)

Auden - Seascape

Ted Hughes - The Howling of Wolves

UNIT-IV (Prose)

Robert Lynd - Forgetting

H. Belloc - A conversation with A Reader

UNIT-V (Drama)

John Galsworthy - Strife

O R J.M. Synge - Riders of the Sea

UNIT-VI William Golding - Lord of the Flies (Fiction)

UNIT-VII 1. Simile 2. Metaphor 3. Alliteration 4. Onomatopoeia 5. Ballad 6. Epic 7. Dramatic Monologue.

BOOK RECOMMENDED -

1. Golden Treasury - Palgrave
2. A Glossary of Literary Terms - M.H. Abrams
3. An Introduction to the study of English literature - B.Prasad

Dr. M. Chakraborty

Dr. S. Gupta

DR. MERILY ROY

Revised syllabus

SOCIOLOGY 2019-2020

B.A. PART-II

PAPER - I

SOCIOLOGY OF TRIBAL SOCIETY

(Paper Code-0185)

- UNIT-I **Tribes:** Concepts, Characteristics, Tribes and Schedule Tribes, Distinction between Tribe and Caste.
- UNIT-II **Classification of Tribal people:** Food gatherers and hunters, Shifting cultivates, Nomads, Peasant settled Agriculturists and Artisans.
- UNIT-III **Socio-cultural Profile:** Kinship, Marriage, Family, Religion and belief cultural traditions.
- UNIT-IV **Tribal sensitization:** Tribal Mobility, Schemes of Tribal Development, Various Tribal Movements.
- UNIT-V **Problems of Tribal People:** Poverty, Illiteracy, Indebtedness, Agrarian issues, Exploitation study of tribal communities in Chhattisgarh with special reform to Particularly Venerable Tribal Groups (PVTG).

ESSENTIAL READINGS :-

- 1 Vidyarthi, L.P. 1965. Cultural Counters of Tribal Bihar, Punthi Pustak, Culcutta.
- 2 Bose, N.K. 1971. Tribal Life in India, National Book Trust, New Delhi.
- 3 Das, R.K. 1988. The Tribal Social Structure, Inter India Publications, New Delhi.
- 4 Dubey, S.C.. 1977. Tribal Heritage of India, Ethnicity, Identity and Interaction, Vol.1, Vikash Publishing House, Delhi.
- 5 Elwin, Varrier. 1989. The Tribal World of Verrier Elwin: An Autobiography, Oxford, New Delhi.
- 6 Russell, R.V. and Hira Lal. 1916. The Tribes and Castes of Central Province of India, 4 Vols. Cosmo Publications, New Delhi.

Shobha S
10/6/2019

Shobha S
10.06.2019

Musangar
10-6-19

Revised syllabus
SOCIOLOGY **2019 - 2020**

B.A. PART-II.

PAPER-II

CRIME AND SOCIETY

(Paper Code-0186)

- UNIT-I **Concept of Crime:** Meaning, Characteristics and Types.
School of Crime: Classical, Sociological and Psychological.
- UNIT-II **Structure of Crime:** Anomie, Criminality and Suicide , Organized Crime ,
White Collar Crime and Cyber Crime
- UNIT-III **Social Evils and Crime:** Alcoholism, Drug Addiction, Dowry and Beggary.
- UNIT-IV **Punishment:** Meaning, Characteristics, Objectives and Types,
Major Theories of Punishment.
- UNIT-V **Correctional Process:** Role of Police and Judiciary in India, Development of Jail
reforms in India and Modern correctional concepts- Probation , Parole and after
care Programme.

ESSENTIAL READINGS :-

1. Mike, & Maguire. (2007). *The Oxford Hand Book of Criminology*. London: Oxford University Press.
2. Haster, S., & Eglin, P. (1992). *A Sociology of Crime*. London: Routledge Publishers.
3. Mead, G. H. (1934). *Mind Self and Society*. Chicago: Chicago University Press
4. Gottfredson, Michael, R., Hirschi, & Travis. (1990). *A General Theory of Crime*. London: Stanford University Press.
5. Sutherland, & Edwin, H. (1924). *Principles of Criminology*. Chicago: Chicago University Press.
6. Sutherland, Edward, H., & White, C. (1949). *Crime*. New York, Holt, Rinehart: Winston Press, New York.

Shabbir
10/6/2019

Shabbir
10/06/2019

Shabbir
10-6-19

HEMCHAND YADAV VISHWAVIDYALAYA, DURG (C.G.)

REVISED SYLLBUS

B.A. Part- II (Economics)

Subject : Macro Economics, Paper-I (Code: 0181)

UNIT 1

National Income: Concept and measurement of national income, Economic welfare and national income, Social accounting. Circular flow of income, National income accounting, Green accounting Classical theory of employment, Say's law of market Keynesian theory of employment.

UNIT 2

Consumption Function - Average and marginal propensity to consume, Keynes's psychological law of consumption. Determinants of the consumption function. The saving function. The investments multiplier and its effectiveness, The investment Function - marginal efficiency of capital, Autonomous and induced investment. Saving and investment equality.

UNIT 3

Nature and Characteristics of trade cycle, Theories of trade cycle: Hawtrey's monetary theory, Hayek's over investment theory, Keynes's view on trade cycles, Schumpeter's theory of innovation, Samuelson and Hicks multiplier accelerator model, Control of trade cycle.

UNIT 4

International Trade - Inter-regional and international trade, Comparative advantage cost theory, Opportunity cost theory and Heckscher Ohlin theory, International trade and economic development, Tariffs & import quotas, Concept of optimum tariff. Balance of trade & balance of payment., Concept & components of BOP, Equilibrium & disequilibrium in BOP, Relative merits & demerits of devaluation, Foreign trade multiplier.

UNIT 5

Functions and objectives of international monetary fund, World Bank and World Trade Organization, International monetary reforms and India, Foreign trade in

India recent change in the composition and direction of foreign trade, India's balance of payment, Export promotion and import substitution in India. Multinational Corporation and India.

BASIC READING LIST -

- Ackley, G. (1976) – “ Macro Economics; Theory and Policy,” Mcmillan Publishing Company, Newyork.
 - Day, A.C.L. (1960) – “Outline of Monetary Economics,” Oxford University Press Oxford.
 - Gupta, S.B. (1994)- “Monetary Economics,” S. Chand and Co., Delhi
 - Heijdra, B.J. and F.V. Ploeg (2001) – “Foundations of Modern Macro-economics,” Oxford University Press, Oxford.
 - Lewis, M.K. and P.D. Mizan (2000) –“ Monetary Economics, “ Oxford University Press, New Delhi.
 - Shapiro, E. (1996) – “Macroeconomic Analysis,” Galgotia Publications, New Delhi .
- READING LIST - -** Ackley, G. (1976),” Macroeconomics : Theory and Policy”, Macmillan Publishing Company, New York. -
- Day, A.C.L. (1960) –“ Outline of Monetary Economics,” Oxford University Press Oxford.
- Gupta, S.B. (1994)- “Monetary Economics,” S. Chand and Co., Delhi
 - Heijdra, B.J. and F.V. Ploeg (2001) –“ Foundations of Modern Macro-economics, “ Oxford University Press, Oxford.
 - Lewis, M.K. and P.D. Mizan (2000) - Monetary Economics, Oxford University Press, New Delhi.
 - Shapiro, E. (1996) – “Macroeconomic Analysis,” Galgotia Publications, New Delhi.
 - Dillard, D. (1960)- “The Economics of John Mayanand Keynes, “Crossby Lockwood and Sons, London.
 - Hanson, A.H. (1953), “A Guide to Keynes, “ McGraw Hill, New York.
 - Higgins, B. (1963), “Economic Development; Principles, Problems and Policies, “ Central Book Depot, Allahbad.
 - Keynes, J.M. (1936), “The General Theory of Employment, Interest and Money,” Macmillan, London.
 - Kindleberger, C.P. (1958), “Economic Development,” McGraw Hill Book company, New York.
- Powelson, J.P.C. (1960), “ National Income and Flow of Funds Analysis,” McGraw Hill, New York.

HEMCHAND YADAV VISHWAVIDYALAYA, DURG (C.G.)

REVISED SYLLBUS

B.A. Part- II (Economics)

Subject : Money, Banking and Public Finance, Paper-II (Code: 0182)

UNIT 1

Basic concepts : Money - meaning and functions, Gresham's law; Quantity theory of money- Cash transaction and cash balance approaches; Value of Money, Inflation, deflation and reflation, types, causes and effects on different sectors of the economy; Demand pull and cost push inflation; Measures to control inflation. Phillips curve, Concept of demonetization.

UNIT 2

Commercial banking- meaning and types; Functions of commercial banks, The process of credit creation, purpose and limitations; Liabilities and assets of banks; Evolution of commercial banking in India after independence; A critical appraisal of the progress of commercial banking after Nationalization, Functions of a central bank; Quantitative and qualitative methods of credit control; Bank rate policy; Open market operations; Variable reserve ratio and selective methods. Role and functions of the Reserve bank of India; Objectives and limitations of monetary policy with special reference to India.

UNIT 3

Meaning and scope of public finance; Distinction between private and public finance; public goods v/s private goods; The Principle of maximum social advantage; Role of the government in economic activities ; Public expenditure - Meaning, classification and principles of public expenditure; Trends in public expenditure and causes of growth of public expenditure in India.

UNIT 4

Sources of Public revenue; taxation - Meaning, Canons and classification of taxes; Division of tax burden. The benefit and ability to pay approaches; Impact and incidence of taxes; Taxable capacity; Effects of taxation; Characteristics of a good tax



system; Equity and Justice in Taxation, Major trends in tax revenue of the Central and State Government in India.

UNIT 5

Public debt and financial administration: Sources of public borrowing, Effects of public debt. Methods of debt redemption. The public budget- Kinds of budget, Economic and functional classification of the budget; Preparation and passing of budget in India.

READING LIST -

- Ackley G. (1978), "Macroeconomics : Theory and Policy," Macmillan Publishing Co., New York.
 - Bhargavas B.H. (1981), "The Theory and Working of Union Finance in India," Chaitanya Publishing House Allaybad.
 - Gupta, S.B. (1994), "Monetary Economics", S. Chand & Company, New Delhi.
 - Houghton. E.W. (Ed.) (1988), "Public Finance." Pengum, Battinore - Jha R. (1998), Modern Public Economics. Routledge, London.
 - Mithani, D.M. (1981), "Modern Public Finance," Himalaya Publishing House, Mumbai.
 - Musgrave, R.A. and P.B. Musgrave (1976)," Public Finance in Theory and Practice", McGraw Hill, Kogakusha, Tokyo.
 - Shapiro, E. (1996), "Macroeconomics Analysis," Galgotia Publications, New Delhi.
- ADDITIONAL READING LIST

- Day, A.C.L. (1960), "Outline of Monetary Economics, " Oxford University Press, Oxford.
- De Kock, M.H. (1960)," Central Banking." Staples Press, London.
- Due, J.E. (1963), "Government Finance," Irwin, Homewood.
- Government of India, "Economic Survey" (Annual), New Delhi
- Halm, G.N. (1955), "Monetary Theory," Asia Publishing House, New Delhi



Syllabus of Geography

(B.A./B. Sc. II Year)

Session

2019-2020

2020-2021

Dr. S. K. Das
27.5.19

Dr. Chandan
27.5.19

DR. R. Sharma
27.05.19

VS
27/05/19

Brief Summary

3 Year Integrated UG Courses (B.A./ B.Sc.) in Geography

B.A. /B.Sc. Part I

The B.A. /B.Sc. Part-I Examination in Geography will be 150 marks. There will be two theory papers and one Practical each of 50 marks as follows:

- | | |
|-------------|---------------------|
| Paper - I | Physical Geography |
| Paper - II | Human Geography. |
| Paper - III | Practical Geography |

B.A. /B.Sc. Part-II

The B.A./B.Sc. Part-II Examination in Geography will be 150 marks. There will be two theory papers and one Practical each of 50 marks as follows:

- | | |
|-----------|----------------------------------|
| Paper-I | Economic and Resources Geography |
| Paper-II | Regional Geography of India |
| Paper-III | Practical Geography |

B.A. /B.Sc. Part III

The B.A. /B.Sc. Part III Examination in Geography will be 150 marks. There will be two theory papers and one Practical each of 50 marks as follows

- | | |
|-------------|---------------------------|
| Paper – I | Remote Sensing and GIS |
| Paper - II | Geography of Chhattisgarh |
| Paper - III | Practical Geography |

(Dr. S. K. Das)
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27.5.19

Dr. R. Sharma
27.05.19

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B.A. /B.Sc. Part II

PAPER - I

ECONOMIC AND RESOURCES GEOGRAPHY

Max. Marks: 50

(Paper Code-0187)

- Unit I** Meaning, scope and approaches to economic geography; Main concepts of economic geography; Resource: concept and classification; Natural resources: soil, forest and water.
- Unit II** Mineral resources: iron ore and bauxite; Power resources: coal, petroleum and hydro electricity; Resource conservation; Principal crops: wheat, rice, sugarcane and tea
- Unit III** Agricultural regions of the world (Derwent Whittlesey); Theory of agricultural location (Von Thunen); Theory of industrial location (Weber); Major industries: iron and steel, textiles, petrochemical and sugar; industrial regions of the world.
- Unit IV** World transportation: major trans-continental railways, sea and air routes; International trade: patterns and trends; Major trade blocks: LAFTA, EEC, ASEAN; Effect of globalization on developing countries.
- Unit V** Conservation of resources; evolution of the concept, principles, philosophy, and approach to conservation, resources conservation and practices. Policy making and sustainable development.

Books Recommended:

1. Alexander, J. W. (1988): Economic Geography. Prentice-Hall, New Delhi,.
2. Bryson, J., Henry, N., Keeble, D. and Martin, R. (eds.) (1999): The Economic Geography Reader: Producing and Consuming Global Capitalism. John Wiley and Sons, Inc, New York.
3. Clark, G. L., Gertler, M. S. and Feldman, M. P. (eds.) (2000): The Oxford Handbook of Economic Geography. Oxford University Press, USA.
4. Coe, N. (2007): Economic Geography: A Contemporary Introduction. Blackwell Publishers, Inc., Massachusetts.
5. Gautam, A. (2006): *Aarthik Bhugol Ke Mool Tattava*, Sharda Pustak Bhawan, Allahabad.
6. Guha, J. S. and Chatteraj, P.R. (2002): A New Approach to Economic Geography: A Study of Resources. The World Press Private Limited, Kolkata.
7. Hanink, D. M. (1997): Principles and Applications of Economic Geography: Economy, Policy, Environment. John Wiley and Sons, Inc, New York.
8. Hartshorne, T. A. and Alexander, J. W. (1988): Economic Geography (3rd revised edition) Englewood Cliff, New Jersey, Prentice Hall
9. Hudson, R. (2005): Economic Geographies: Circuits, Flows and Spaces. Sage Publications, London.
10. Knowles, R, Wareing, J. (2000): Economic and Social Geography Made Simple, Rupa and Company, New Delhi.

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B.A. /B.Sc. Part II
PAPER - II
GEOGRAPHY OF INDIA
Max. Marks: 50
(Paper Code-0188)

- Unit I** Physical Features: Structure, Relief, Climate, Physiographic Regions, Drainage, Climate-origin and mechanism of monsoon, and regional and Seasonal variation.
- Unit II** Natural Resources: Soils - types, their distribution and characteristics. Water Resources (major irrigation and hydel power projects); Forests-types, distribution, economic significance and conservation. Mineral and Power resources-Iron-ore, Manganese, Copper, Coal, Petroleum and Natural gas, Non conventional sources of energy.
- Unit III** Cultural Features : Population - Growth, Density and Distribution. Agriculture - Major crops, impact of Green Revolution and Agricultural regions.
- Unit IV** Industries Localization, Development & Production - Iron and steel, Cotton Textile, Cement, Sugar, Transport, Foreign Trade. Industrial Region.
- Unit V** Detailed Study of the following regions of India : Kashmir Valley, North- East Region, Chhota Nagpur Plateau, Thar Desert, Islands of India.

Books Recommended:

1. Chauhan, P.R. and Prasad, M. (2003): *Bharat Ka Vrihad Bhugol*, Vasundhara Prakashan, Gorakhpur.
2. Farmer, B.H. (1983): *An Introduction to South Asia*. Methuen, London
3. Gautam, A. (2006): *Advanced Geography of India*, Sharda Pustak Bhawan, Allahabad
4. Johnson, B.L.C. (1963): *Development in South Asia*. Penguin Books, Harmondsworth
5. Krishnan, M.S. (1982): *Geology of India and Burma*, CAS Publishers and Distributors, Delhi.
6. Khullar, D.R. (2007): *India: A Comprehensive Geography*, Kalyani Publishers, New Delhi
7. Nag, P. and Gupta, S. S. (1992): *Geography of India*, Concept Publishing Company, New Delhi.
8. Rao, B.P. (2007): *Bharat ke Bhaugolik Sameeksha*, Vasundhara Prakashan, Gorakhpur.
9. Sharma, T.C. and Coutinho, O. (2003): *Economic and Commercial Geography of India*, Vikas Publishing House Private Ltd. New Delhi.
10. Singh, J. (2003): *India: A Comprehensive Systematic Geography*. Gyanodaya Prakashan, Gorakhpur
11. Singh, J. (2001): *Bharat: Bhougolik Aadhar Avam Ayam*, Gyanodaya Prakashan, Gorakhpur.
12. Singh, R.L. (ed.) (1971): *India: A Regional Geography*. National Geographical Society of India, Varanasi.
13. Spate, O.H. K., Learmonth A. T. A. and Farmer, B. H. (1996): *India, Pakistan and Sri Lanka*. Methuen, London, 7th edition.
14. Sukhwai, B.L. (1987): *India: Economic Resource Base and Contemporary Political Patterns*. Sterling Publication, New Delhi
15. Tiwari, R.C. (2007): *Geography of India*, Prayag Pustak Bhawan, Allahabad.
16. Wadia, D. N. (1959): *Geology of India*. Mac-Millan and Company, London and student edition, Madras.

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B.A. /B.Sc. Part II
PAPER - III
PRACTICAL GEOGRAPHY
Max. Marks: 50

SECTION A

MAP INTERPRETATION, PROJECTIONS AND STATISTICAL METHODS (M.M. 25)

Unit I Distribution Maps: Dot Map, Choropleth Map and Isopleth Map.

Unit II Map Projections: Definition and classification; Conical, Zenithal, and Cylindrical Projections.

Unit III Interpretation of Weather Maps: Use of Meteorological Instruments.

Unit IV Statistical Methods: Quartile: Mean Deviation, Standard Deviation and Quartile Deviation; Relative Variability and Co-efficient of Variation.

SECTION B

SURVEYING (M.M. 15)

Unit V Surveying: Whole Circle Bearing and Reduced Bearing, Methods of Prismatic Compass Survey.

PRACTICAL RECORD AND VIVA VOCE (M.M. 10)

Books Recommended:

1. Alvi, Z. 1995 : Statistical Geography: Methods and Applications, Rawat Pub. New Delhi: .
2. Davis, R.E. and Foote, F.S. (1953): Surveying, 4th edition, McGraw Hill Publication, New York
3. Kanetker, T.P. and Kulkarni, S.V.(1967): Surveying and Levelling, Vol I and II V.G. Prakashan, Poona.
4. Natrajan, V. (1976): Advanced Surveying, B.I. Publications., Mumbai.
5. Pal, S.K. 1999 : Statistics for Geoscientists, Concept publishing Company, New Delhi
6. Punmia, B.C.(1994): Surveying, Vol I, Laxmi Publications Private Ltd, New Delhi.
7. Raisz, E. (1962): General Cartography. John Wiley and Sons, New York. 5th edition
8. Sarkar, A. K. (1997): Practical Geography: A Systematic Approach. Orient Longman, Kolkata.
9. Sharma, J. P. (2001): *Prayogik Bhugol.*, Rastogi Publication, Meerut 3rd. edition.
10. Silk, J. 1979 : Statistical techniques in Geography, George Allen and Unwin, London
11. Singh, R.L. and Singh, Rana P.B. (1993): Elements of Practical Geography. (Hindi and English editions). Kalyani Publishers, New Delhi.,
12. Singh, L.R. (2006): Fundamentals of Practical Geography, Sharda Pustak Bhawan, Allahabad.
13. Venkatramaiah, C. (1997): A Text Book of Surveying, Universities Press, Hyderabad.

Dr. S. K. Das
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27/5/19

बी.ए./बी.एस.सी. –द्वितीय वर्ष
प्रश्न पत्र–प्रथम
आर्थिक एवं संसाधन भूगोल

(कोड क्रमांक 0187)

अधिकतम अंक: 50

- इकाई—1 :** आर्थिक भूगोल का अर्थ, विषय क्षेत्र एवं उपागम; आर्थिक भूगोल की आधारभूत संकल्पनाये; संसाधन : संकल्पनायें एवं वर्गीकरण; प्राकृतिक संसाधन : मिट्टी, वन एवं जल ।
- इकाई—2 :** खनिज संसाधन : लौह अयस्क एवं बाक्साईट; शक्ति संसाधन कोयला, पेट्रोलियम एवं जल विद्युत; संसाधन संरक्षण ; प्रमुख फसले: गेहूँ, चावल, गन्ना, एवं चाय ।
- इकाई—3 :** विश्व के कृषि प्रदेश (व्हिटलसी के अनुसार); कृषि अवस्थिति के सिद्धान्त (वॉन थ्यूनेन); औद्योगिक स्थानीयकरण का सिद्धान्त (वेबर); प्रमुख उद्योग : लौह एवं इस्पात, वस्त्र उद्योग, शैलरासायनिक एवं शक्कर; विश्व के औद्योगिक प्रदेश ।
- इकाई—4 :** विश्व परिवहन : प्रमुख ट्रांस महाद्वीपीय रेलवे, समुद्र एवं वायु मार्ग; अंतर्राष्ट्रीय व्यापार प्रतिरूप एवं प्रवृत्तियाँ; प्रमुख व्यापार संघ : लैटिन अमेरिकी स्वतंत्र व्यापार संघ (LAFTA), यूरोपीय साझा बाजार (EEC), दक्षिणी-पूर्वी एशियाई राष्ट्रों का संघ (ASEAN), विकासशील देशों पर भूमण्डलीकरण का प्रभाव ।
- इकाई—5 :** संसाधनों का संरक्षण; संकल्पनाओं का उद्भव, सिद्धांत, दर्शन एवं संरक्षण के उपागम, संसाधन संरक्षण एवं प्रवृत्तियाँ, अक्षय विकास एवं नीति निर्माण ।

Books Recommended:

1. Alexander, J. W. (1988): Economic Geography. Prentice-Hall, New Delhi,.
2. Bryson, J., Henry, N., Keeble, D. and Martin, R. (eds.) (1999): The Economic Geography Reader: Producing and Consuming Global Capitalism. John Wiley and Sons, Inc, New York.
3. Clark, G. L., Gertler, M. S. and Feldman, M. P. (eds.) (2000): The Oxford Handbook of Economic Geography. Oxford University Press, USA.
4. Coe, N. (2007): Economic Geography: A Contemporary Introduction. Blackwell Publishers, Inc., Massachusetts.
5. Gautam, A. (2006): *Aarthik Bhugol Ke Mool Tattava*, Sharda Pustak Bhawan, Allahabad.
6. Guha, J. S. and Chatteraj, P.R. (2002): A New Approach to Economic Geography: A Study of Resources. The World Press Private Limited, Kolkata.
7. Hanink, D. M. (1997): Principles and Applications of Economic Geography: Economy, Policy, Environment. John Wiley and Sons, Inc, New York.
8. Hartshorne, T. A. and Alexander, J. W. (1988): Economic Geography (3rd revised edition) Englewood Cliff, New Jersey, Prentice Hall
9. Hudson, R. (2005): Economic Geographies: Circuits, Flows and Spaces. Sage Publications, London.
10. Knowles, R, Wareing, J. (2000): Economic and Social Geography Made Simple, Rupa and Company, New Delhi.

(Dr. S. K. Das) 27.5.19
Dr. R. Sharma 27.5.19
Dr. R. Sharma 27.5.19

बी.ए./बी.एस.सी. द्वितीय वर्ष
प्रश्न पत्र- द्वितीय
भारत का भूगोल

(कोड क्रमांक 0188)

अधिकतम अंक: 50

- इकाई -1** भौगोलिक स्वरूप – संरचना, उच्चावच जलवायु, भू-आकृतिक प्रदेश, अपवाह, जलवायु-मानसून की उत्पत्ति एवं विकास प्रक्रिया तथा पादेशिक एवं मौसमी विविधता।
- इकाई -2** प्राकृतिक संसाधन – मिट्टियाँ, प्रकार, वितरण एवं विशेषताएँ, जल संसाधन, सिंचाई और बहुउद्देशीय परियोजनाएँ, वन-प्रकार, वितरण आर्थिक महत्व एवं संरक्षण। खनिज एवं शक्ति के संसाधन – लौह अयस्क, मैग्नीज, तांबा, कोयला, पेट्रोलियम और प्राकृतिक गैस, गैर पारंपरिक उर्जा, (सौर उर्जा, पवन उर्जा ज्वारीय उर्जा, भूतापीय उर्जा)।
- इकाई -3** सांस्कृतिक तत्व, जनसंख्या वृद्धि, घनत्व और वितरण, कृषि प्रमुख खाद्य फसलें, हरित क्रांति का प्रभाव, कृषि प्रदेश,।
- इकाई -4** उद्योग-स्थानीकरण, औद्योगिक विकास और उत्पादन – लौहा और इस्पात उद्योग, सूती वस्त्र उद्योग, सीमेंट, चीनी, यातायात और व्यापार, औद्योगिक प्रदेश।
- इकाई -5** भारत के निम्न प्रदेशों का विस्तृत अध्ययन कश्मीर घाटी, उत्तर पूर्वी प्रदेश, छोटा नागपुर का पठार, थार मरुस्थल भारत के द्वीप समूह।

Books Recommended:

1. Chauhan, P.R. and Prasad, M. (2003): *Bharat Ka Vrihad Bhugol*, Vasundhara Prakashan, Gorakhpur.
2. Farmer, B.H. (1983): *An Introduction to South Asia*. Methuen, London
3. Gautam, A. (2006): *Advanced Geography of India*, Sharda Pustak Bhawan, Allahabad
4. Johnson, B.L.C. (1963): *Development in South Asia*. Penguin Books, Harmondsworth
5. Krishnan, M.S. (1982): *Geology of India and Burma*, CAS Publishers and Distributors, Delhi.
6. Khullar, D.R. (2007): *India: A Comprehensive Geography*, Kalyani Publishers, New Delhi
7. Nag, P. and Gupta, S. S. (1992): *Geography of India*, Concept Publishing Company, New Delhi.
8. Rao, B.P. (2007): *Bharat kee Bhaugolik Sameeksha*, Vasundhara Prakashan, Gorakhpur.
9. Sharma, T.C. and Coutinho, O. (2003): *Economic and Commercial Geography of India*, Vikas Publishing House Private Ltd. New Delhi.
10. Singh, J. (2003): *India: A Comprehensive Systematic Geography*. Gyanodaya Prakashan, Gorakhpur
11. Singh, J. (2001): *Bharat: Bhougolik Aadhar Avam Ayam*, Gyanodaya Prakashan, Gorakhpur.
12. Singh, R.L. (ed.) (1971): *India: A Regional Geography*. National Geographical Society of India, Varanasi.
13. Spate, O.H. K., Learmonth A. T. A. and Farmer, B. H. (1996): *India, Pakistan and Sri Lanka*. Methuen, London, 7th edition.
14. Sukhwai, B.L. (1987): *India: Economic Resource Base and Contemporary Political Patterns*. Sterling Publication, New Delhi
15. Tiwari, R.C. (2007): *Geography of India*, Prayag Pustak Bhawan, Allahabad.
16. Wadia, D. N. (1959): *Geology of India*. Mac-Millan and Company, London and student edition, Madras.

Dr. S. K. Das
27.5.19

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27.5.19

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बी.ए./बी.एस.सी. द्वितीय वर्ष
प्रश्न पत्र—तृतीय
प्रायोगिक भूगोल

अधिकतम अंक : 50

खण्ड—अ. मानचित्र की व्याख्या, प्रक्षेप और सांख्यिकीय विधियां ।

(25 अंक)

इकाई —1 मानचित्र — बिन्दु विधि, छाया विधि, सममान रेखा मानचित्र (मानचित्र निर्माण)

इकाई —2 प्रक्षेप — परिभाषा एवं प्रकार शंक्वाकार, खमध्य बेलनाकार प्रक्षेप.

इकाई —3 मौसम मानचित्र की व्याख्या एवं मौसम संबंधी उपकरणों का उपयोग.

इकाई —4 सांख्यिकीय विधियां — विचलन— चतुर्थांक माध्य विचलन, मानक विचलन, चतुर्थक विचलन, सापेक्षिक परिवर्तनशीलता, प्रसरण गुणक ।

खण्ड—ब. सर्वेक्षण

(15 अंक)

इकाई —5 प्रिज्मीय सर्वेक्षण— पूर्णवृत्त दिक्मान, समानीत दिक्मान एवं प्रिज्मीय कम्पास सर्वेक्षण की विधियाँ ।

प्रायोगिक पुस्तिका और मौखिक परीक्षा

(10 अंक)

Books Recommended:

1. Alvi, Z. 1995 : Statistical Geography: Methods and Applications, Rawat Pub. New Delhi: .
2. Davis, R.E. and Foote, F.S. (1953): Surveying, 4th edition, McGraw Hill Publication, New York
3. Kanetker, T.P. and Kulkarni, S.V.(1967): Surveying and Levelling, Vol I and II V.G. Prakashan, Poona.
4. Natrajan, V. (1976): Advanced Surveying, B.I. Publications., Mumbai.
5. Pal, S.K. 1999 : Statistics for Geoscientists, Concept publishing Company, New Delhi
6. Punmia, B.C.(1994): Surveying, Vol I, Laxmi Publications Private Ltd, New Delhi.
7. Raisz, E. (1962): General Cartography. John Wiley and Sons, New York. 5th edition
8. Sarkar, A. K. (1997): Practical Geography: A Systematic Approach. Orient Longman, Kolkata.
9. Sharma, J. P. (2001): *Prayogik Bhugol.*, Rastogi Publication, Meerut 3rd edition.
10. Silk, J. 1979 : Statistical techniques in Geography, George Allen and Unwin, London
11. Singh, R.L. and Singh, Rana P.B. (1993): Elements of Practical Geography. (Hindi and English editions). Kalyani Publishers, New Delhi.,
12. Singh, L.R. (2006): Fundamentals of Practical Geography, Sharda Pustak Bhawan, Allahabad.
13. Venkatramaiah, C. (1997): A Text Book of Surveying, Universities Press, Hyderabad.

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हेमचंद यादव विश्वविद्यालय, दुर्ग (छ.ग.)

(पूर्व नाम- दुर्ग विश्वविद्यालय, दुर्ग)

रायपुर नाका दुर्ग (छ.ग.)-491001

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वेब साइट : www.durguniversity.ac.in

दूरभाष : 0788-2359400

क्र. 3861 / अका. / 2021

दुर्ग, दिनांक 30/7/21

प्रति,

प्राचार्य,

समस्त संबद्ध महाविद्यालय,

हेमचंद यादव विश्वविद्यालय,

दुर्ग (छ.ग.)

विषय:- स्नातक स्तर भाग-तीन के पाठ्यक्रम विषयक।

संदर्भ:- संयुक्त संचालक, उच्च शिक्षा विभाग के पत्र क्र. 2456/315/आजशि/सम/2019, दिनांक 16.05. 2019।

—00—

विषयांतर्गत लेख है कि संदर्भित पत्र के माध्यम से प्राप्त स्नातक स्तर भाग-तीन के निम्नलिखित कक्षा/विषयों के परिवर्तित/संशोधित पाठ्यक्रम शिक्षा सत्र 2021-22 से लागू किये जाते हैं:-

1. बी.ए. - आधार पाठ्यक्रम - हिन्दी भाषा, हिन्दी साहित्य, राजनीतिशास्त्र, अर्थशास्त्र, नृत्य, दर्शनशास्त्र, समाजशास्त्र, इतिहास, मानवविज्ञान, संस्कृत, सांख्यिकी प्राचीन भारतीय इतिहास, भूगोल, मनोविज्ञान
2. बी.एस-सी. - आधार पाठ्यक्रम-हिन्दी भाषा, जीव विज्ञान, मानवविज्ञान, बायोटेक्नोलॉजी, कम्प्यूटर साईंस, गणित, भौतिक शास्त्र, प्राणीशास्त्र, सूक्ष्मजीव विज्ञान, वनस्पतिशास्त्र, भूविज्ञान, इलेक्ट्रॉनिक्स, रसायन शास्त्र, सांख्यिकी, भूगोल।
3. बी.ए./बी.एस.सी. - आधार पाठ्यक्रम - हिन्दी भाषा एवं गृह विज्ञान।
(गृह विज्ञान)
4. बी.सी.ए. - भाग-3
5. बी.कॉम. - भाग-1, भाग-2 एवं भाग-3 का परिवर्तित पाठ्यक्रम सत्र 2019-20 में जारी कर लागू किया जा चुका है।

कृ.प.उ.

उपरोक्त विषयों को शिक्षा सत्र 2021-22 से संशोधित रूप में स्नातक स्तर भाग-तीन के लिए लागू किया जाता है स्नातक स्तर भाग-एक हेतु सत्र 2019-20 एवं स्नातक स्तर भाग-दो हेतु सत्र 2020-21 में लागू पाठ्यक्रम मान्य होंगे।

टीप:- परिवर्तित/संशोधित पाठ्यक्रम विश्वविद्यालय की वेबसाईट पर उपलब्ध है।


कुलसचिव

क्र. 3862 /अका./2021

दुर्ग, दिनांक 30/7/21

प्रतिलिपि:-

1. संयुक्त संचालक, उच्च शिक्षा विभाग के पत्र क्र. 2456/315/आउशि/सम/2019, दिनांक 16.05.2019 के परिपेक्ष्य में सूचनार्थ
2. उपकुलसचिव, परीक्षा विभाग एवं उपकुलसचिव, गोपनीय विभाग हेमचंद्र यादव विश्वविद्यालय, दुर्ग।
3. वेबसाईट प्रभारी, वेबसाईट पर पाठ्यक्रम प्रकाशित करने हेतु।
4. कुलपति के निज सहायक एवं कुलसचिव के निज सहायक, हेमचंद्र यादव विश्वविद्यालय, दुर्ग।


सहा. कुलसचिव (अका.)

HEMCHAND YADAV VISHWAVIDYALAYA, DURG (C.G.)

Website - www.durguniversity.ac.in, Email - durguniversity@gmail.com



SCHEME OF EXAMINATION & SYLLABUS of

**B.A. Final Year
Session 2021-22**

**(Approved by Board of Studies)
Effective from July 2021**

REVISED ORDINANCE NO.11

(As per State U.G.C. Scheme)

BACHELOR OF ARTS

1. The three year course have been broken up in to three Parts.
Part-I Examination : at the end of the first year.
Part-II Examination : at the end of the second year and
Part-III Examination : at the end of the third year.
2. A candidate who after passing (10-2) or intermediate examination of C.G. Board of Secondary Education, Raipur or any other examination recognised by the University or C.G. Board of Secondary Education as equivalent thereto, has attended a regular course of study in an affiliated college or in the Teaching Department of the University for one academic year shall be eligible for appearing at the B.A. Part-I examination.
3. A candidate who after passing B.A. Part-I examination of the University or any other examination recognised by the University as equivalent thereto has attended a regular course of study for one academic year in an affiliated college or in the Teaching Department of the University shall be eligible for appearing at the B.A. Part II Examination.
4. A candidate who after passing B.A. Part II examination of the University has completed a regular course of study for one academic year in an affiliated college or in the Teaching Department of the University shall be eligible for appearing at the B.A. Part-III examination.
5. Besides regular students, subject to their compliance with this ordinance, ex-students and non-collegiate candidates shall be eligible for admission to the examination as per provisions of Ordinance N. 6 relating to Examinations (General). Provided that non-collegiate candidates shall be permitted to offer only such subjects/papers as are taught to the regular students at any of the University Teaching Department or College.
6. Every candidate for the Bachelor of Arts examination shall be examined in : A.
Foundation Course :
 - i) Group B - Hindi Language
 - ii) Group C - English LanguageB. Three Core subjects : One subject from any three groups out of the following six groups :
 1. Sociology/Ancient Indian History/Anthropology.
 2. Political Science/Home Science/Vocational Course.

3. Hindi Literature/Sanskrit Literature/Urdu Literature/Math.
 4. Economics/Music/Linguistics/Defence studies.
 5. Philosophy/Psychology/Geography/Education/Management.
 6. History/English Literature/Statistics.
 7. Practicals (if necessary) for each core subject.
7. Any candidate who has passed the B.A. examination of the University shall be allowed to present himself for examination in any of additional subjects prescribed for the B.A. examination and not taken by him at the degree examination. Such candidate will have to first appear and pass the B.A. Part I examination in the subject which he proposes to offer and then the B.A. Part II and Part III examination in the same subject. Successful candidate will be given a certificate to that effect.
8. In order to pass at any part of the three year degree course examination, an examinee must obtain not less than 33% of the total marks in each subject/group of subjects. In subject/group of subjects, where both theory and practical examination are provided, an examinee must pass in both theory and practical parts of the examination separately.
9. Candidate will have to pass separately at the Part-I, Part II and part-III examination. No division shall be assigned on the result of the Part-I and Part-II examination. In determining the division of the Final examination, total marks obtained by the examinees, in their Part-I, Part-II and Part-III examination in the aggregate shall be taken into account. Candidate will not be allowed to change subjects after passing Part I Examination.
- Provided in case of candidate who has passed the examination through the supplementary examination having failed in one subject only the total aggregate marks being carried over for determining the division shall include the actual marks obtained in the subject in which he appeared at the supplementary examination.
10. Successful examinees at the Part-III examination obtaining 60% or more marks shall be placed in the First division, those obtaining less than 60% but not less than 45% marks in the Second division and other successful examinees in the third division.

SCHEME OF EXAMINATION

Subject	Paper	Max. Marks	Min. Marks
A. Compulsory Subject - Foundation Course :			
Hindi Language	I	75	26
English Language	I	75	26
B. Three Core Subject :			
1. Hindi Literature	I	75	
	II	75	150
2. Sanskrit Literature	I	75	
	II	75	150
3. English Literature	I	75	
	II	75	150
4. Philosophy	I	75	
	II	75	150
5. Economics	I	75	
	II	75	150
6. Political Science	I	75	
	II	75	150
7. History	I	75	
	II	75	150
8. Ancient Indian History Culture & Archaeology	I	50	
	II	50	100
		Practical	50
9. Sociology	I	75	
	II	75	150
10. Geography	I	50	
	II	50	100
		Practical	50
11. Mathematics	I	50	
	II	50	150
	III	50	
12. Statistics	I	50	
	II	50	100
		Practical	50

	Subject	Paper		Max. Marks	Min. Marks
13.	Anthropology	I	50	100	33
		II	50		
			Practical		
14.	Linguistics	I	75	150	50
		II	75		
15.	Indian Music	I	50	100	33
		II	50		
			Practical		
16.	Home Science	I	50	100	33
		II	50		
			Practical		
17.	Education	I	75	150	50
		II	75		
18.	Psychology	I	50	100	33
		II	50		
			Practical		
19.	Management	I	75	150	50
		II	75		
20.	Defence Studies	I	50	100	33
		II	50		
			Practical		
21.	Urdu	I	75	150	50
		II	75		

USE OF CALCULATORS

The Students of Degree/P.G. Classes will be permitted to use of Calculators in the examination hall from annual 1986 examination on the following conditions as per decision of the standing committee of the Academic Council at its meeting held on 31-1-1986-

1. Student will bring their own Calculators.
2. Calculators will not be provided either by the university or examination centres.
3. Calculators with, memory and following variables be permitted +, -, x, $\frac{1}{x}$, square, reciprocal, exponentials log, square root, trigonometric functions, wize, sine, cosine, tangent etc. factorial summation, xy, yx and in the light of objective approval of merits and demerits of the viva only will be allowed.

- इकाई-एक (क) भारत माता : सुमित्रानंदन पंत
(ख) कथन की शैलियाँ
1. विवरणात्मक शैली
2. मूल्यांकन शैली
3. व्याख्यात्मक शैली
4. विचारात्मक शैली
- इकाई-दो (क) सूखी डाली : उपेन्द्रनाथ अशक
(ख) विभिन्न संरचनाएँ
1. विनम्रता सूचक संरचना
2. विधि सूचक संरचना
3. निषेध परक संरचना
4. काल-बोधक संरचना
5. स्थान-बोधक संरचना
6. दिशा बोधक संरचना
7. कार्य-कारण सम्बन्ध संरचना
8. अनुक्रम संरचना
- इकाई-तीन (क) वसीयत : मालती जोशी
(ख) कार्यालयीन पत्र और आलेख
1. परिपत्र
2. आदेश
3. अधिसूचना
4. ज्ञापन
5. अनुस्मारक
6. पृष्ठांकन
- इकाई-चार (क) योग की शक्ति : हरिवंश राय बच्चन
(ख) अनुवाद : स्वरूप एवं परिभाषा, उद्देश्य
स्रोत भाषा और लक्ष्य भाषा,
अच्छे अनुवाद की विशेषताएँ,
अनुवाद प्रक्रिया, अनुवादक
- इकाई-पांच (क) संस्कृति और राष्ट्रीय एकीकरण : योगेश अटल
(ख) घटनाओं, समारोहों आदि का प्रतिवेदन, विभिन्न प्रकार के निमंत्रण पत्र

मूल्यांकन योजना : प्रत्येक इकाई से एक-एक प्रश्न पूछा जाएगा। प्रत्येक प्रश्न में आंतरित विकल्प होगा। प्रत्येक प्रश्न के 15 अंक होंगे। इसलिए प्रत्येक प्रश्न के दो भाग 'क' और 'ख' होंगे एवं अंक क्रमशः 8 एवं 7 अंक होंगे। प्रश्नपत्र का पूर्णांक 75 निर्धारित है।

5/7/2024

डा. आशा निवान

The question paper for B.A./B.Sc./B.Com./B.H.Sc. III Foundation course, English Language and General Answers shall comprise the following items :

Five question to be attempted, each carrying 3 marks.

UNIT-I Essay type answer in about 200 words. 5 essay type question to be asked three to be attempted.	15
UNIT-II Essay writing	10
UNIT-III Precise writing	10
UNIT-IV (a) Reading comprehension of an unseen passage	05
(b) Vocabulary based on text	10
UNIT-V Grammar Advanced Exercises	25

Note: Question on unit I and IV (b) shall be asked from the prescribed text. Which will comprise of popular create writing and the following items. Minimum needs housing and transport Geo-economic profile of M.P. communication Educate and culture. Women and Worm in Empowerment Development, management of change, physical quality of life. War and human survival, the question of human social value survival, the question of human social value, new Economic Philosophy Recent Diberaliation Method) Demoration decentralization (with reference to 73, 74 constitutional Amendment.

Books Prescribed:

Aspects of English Language and Development - Published by M.P. Hindi Granth Academy, Bhopal.

बी. ए. भाग— 3

हिन्दी साहित्य

प्रथम प्रश्न पत्र

जनपदीय भाषा— साहित्य (छत्तीसगढ़ी)

प्रस्तावना—

हिन्दी केवल खड़ी बोली नहीं है, बल्कि एक बहुत बड़ा भाषिक समूह है। हिन्दी जगत में अनेक विभाषाएं, बोलियाँ और उपबोलियाँ विद्यमान हैं जिनमें सकल साहित्य सम्पदा है। इनके सम्यक अध्ययन और अन्वेषण की आवश्यकता है। जनपदीय भाषा छत्तीसगढ़ी निरन्तर विकास की ओर अग्रसर हो रही है अस्तु, इस भाषा का और इसमें रचित साहित्य का इतिहास— विकास स्पष्ट करते हुए इनसे संबंधित प्रमुख रचनाकारों का आलोचनात्मक अनुशीलन करना हिन्दी के वृहत्तर हित में होगा। छत्तीसगढ़ी भाषा का पाठ्यक्रम निम्न बिन्दुओं पर आधारित है—

- (क) छत्तीसगढ़ी भाषा का इतिहास— विकास
- (ख) छत्तीसगढ़ी भाषा में रचित साहित्य का इतिहास
- (ग) छत्तीसगढ़ी भाषा के प्रमुख प्राचीन एवं अर्वाचीन रचनाकारों की कृतियों का अध्ययन।

पाठ्य विषय—

रचनाएँ—

- (1) प्राचीन कवि संत धर्मदास के 3 पद
 1. गुरु पड़्या लागों नाम लखा दीजो हो।
 2. नैना आगे ख्याल घनेरा।
 3. भजन करौ भाई रे, अइसन तन पाय के।
(सन्दर्भ— धर्मदास के शब्दावली से उद्धृत)
- (2) लखनलाल गुप्त का गद्य—
 1. सोनपान
(गद्य— पुस्तक 'सोनपान' के उद्धृत)
- (3) अर्वाचीन रचनाकार
डॉ. सत्यभामा आडिल रचित गद्य
 1. सीख सीख के गोठ
(गद्य पुस्तक 'गोठ' के उद्धृत)
- (4) डॉ. विनय पाठक की कविताएँ—
 1. तँय उठथस सुरूज उथे
 2. एक किसिम के नियाव
('अकादसी और अनचिन्हार' पुस्तक से उद्धृत)
- (5) मुकुन्द कौशल— छत्तीसगढ़ी गजल
"छै बित्ता के मनखे देखों..... से— मछरी मन लाख लेथे" तक
(पुस्तक 'छत्तीसगढ़ी गजल' के पृष्ठ 17 से उद्धृत)

5/7/2024

डॉ. आशा विद्या

Arshika

द्रुतपाठ के रचनाकार- (व्यक्तित्व एवं कृतित्व)

1. सुन्दर लाल शर्मा
2. कपिलनाथ कश्यप
3. रामचन्द्र देशमुख (रंगकर्मी)

अंक विभाजन- व्याख्याएं (3)	- 21 अंक
आलोचनात्मक प्रश्न (2)	- 24 अंक
लघुउत्तरीय प्रश्न (5)	- 15 अंक
वस्तुनिष्ठ (15)	- 15 अंक
कुल अंक	75

इकाई विभाजन

इकाई एक	- व्याख्या
इकाई दो	- प्राचीन एवं अर्वाचीन रचनाकार
इकाई तीन	- (अ) छत्तीसगढ़ी भाषा का इतिहास (ब) छत्तीसगढ़ी साहित्य का इतिहास
इकाई चार	- द्रुत पाठ के तीन रचनाकार
इकाई पाँच	- वस्तुनिष्ठ / (सम्पूर्ण पाठ्यक्रम से)

5/7/2024

डा० आशा विवाज

Ashtorika
5/7/2024

बी.ए. भाग- 3

द्वितीय प्रश्न पत्र

हिन्दी भाषा- साहित्य का इतिहास तथा काव्यांग विवेचन

प्रस्तावना-

हिन्दी भाषा का इतिहास जितना प्राचीन है, उतना ही गुढ़- गहन भी। इसमें रचित साहित्य ने लगभग डेढ़ हजार वर्षों का इतिहास पूरा कर लिया है इसलिए हिन्दी भाषा और साहित्य के ऐतिहासिक विवेचन की बड़ी आवश्यकता है। इसी के साथ- साथ हिन्दी ने अपना जो स्वतंत्र साहित्य शास्त्र निर्मित किया है, उसे भी रूपायित करने की आवश्यकता है। इसके संज्ञान द्वारा विद्यार्थी की मर्मग्राहिणी प्रतिभा का विकास होगा और ऐतिहासिक परिप्रेक्ष्य में शुद्ध साहित्यिक विवेक का सन्निवेश होगा।

पाठ्य विषय-

(क) हिन्दी भाषा का स्वरूप विकास- हिन्दी की उत्पत्ति, हिन्दी की मूल आकर भाषाएँ तथा विभिन्न विभाषाओं का विकास। हिन्दी भाषा के विभिन्न रूप-

1. बोलचाल की भाषा
2. रचनात्मक भाषा
3. राष्ट्रभाषा
4. राजभाषा
5. सम्पर्क भाषा
6. संचार भाषा

हिन्दी का शब्द भण्डार- तत्सम, तद्भव, देशज, आगत शब्दावली।

(ख) हिन्दी साहित्य का इतिहास :- आदिकाल, पूर्व मध्यकाल, उत्तर मध्यकाल और आधुनिक काल की सामाजिक, सांस्कृतिक पृष्ठभूमि, प्रमुख युग प्रवृत्तियाँ, विशिष्ट रचनाकार और उनकी प्रतिनिधि कृतियाँ, साहित्यिक विशेषताएँ।

(ग) काव्यांग

प्रमुख 5 छंद	- काव्य का स्वरूप एवं प्रयोजन।
शब्दालंकार	- रस के विभिन्न भेद, विभिन्न अंग, विभावादि तथा उदाहरण।
अर्थालंकार	- दोहा, सोरठा, चौपाई, कुण्डलियाँ, सवैया।
	- अनुप्रास, यमक, श्लेष, वक्रोक्ति, पुररुक्ति प्रकाश।
	- उपमा, रूपक, उत्प्रेक्षा, अतिशयोक्ति, भ्रांतिमान।

संदर्भ ग्रन्थ-

(1) हिन्दी साहित्य का इतिहास संपादक- डॉ. सुशील त्रिवेदी व बाबूलाल शुक्ल (प्रकाशक- म. प्र. उ. शि. अनुदान आयोग)

5/7/2024

डा. आशा त्रिवेदी

आशा त्रिवेदी

- (2) राजभाषा हिन्दी— मलिक मोहम्मद (प्रभात प्रकाशन दिल्ली)
(3) हिन्दी भाषा— डॉ. भोलानाथ तिवारी।

अंक विभाजन—

आलोचनात्मक (4)	—44 अंक
लघुउत्तरीय प्रश्न (4)	— 16 अंक
वस्तुनिष्ठ प्रश्न (15)	— 15 अंक
कुल अंक — 75 अंक	

इकाई विभाजन—

- इकाई— 1 हिन्दी भाषा का स्वरूप— विकास— (खण्ड— 'क')
इकाई— 2 हिन्दी का शब्द भण्डार— (खण्ड 'क' का अंतिम भाग)
इकाई— 3 हिन्दी साहित्य का इतिहास— (खण्ड— ख)
इकाई— 4 काव्यांग— रस, छंद, अंलकार (भाग— ग)
इकाई— 5 लघुउत्तरीय एवं वस्तुनिष्ठ प्रश्न (सम्पूर्ण पाठ्यक्रम से)

5/7/2024

डॉ. आशा तिवारी

डॉ. आशा तिवारी

डॉ. आशा तिवारी

B.A.-III
ENGLISH LITERATURE
PAPER -I
INDIAN WRITING IN ENGLISH

M.M.: 75

All questions are compulsory.

- Note: 1. Unit - I is compulsory. Two passages from each of the Unit II to V to be set Three to be attempted. (3x5 = 15)
2. Short answer questions from unit VII, Seven to be set and five to be attempted. (5x2 = 10)
3. Long-answer questions from unit II to VI. Two questions from each unit with an internal choice to be set. The candidate has to attempt one question from each unit. (5x10 = 50)

UNIT-I Annotations and short answer questions

UNIT-II Poetry

Toru Dutt	-	Our Casurina Tree	(Non-Detailed)
Rabindranath Tagore	-	Songs 1 & 103 from Gitanjali	(Detailed)
Sarojini Naidu	-	The Ecstasy, The Lotus	(Detailed)

UNIT-III

Kamla Das	-	The Old Playhouse	(Detailed)
or			
Gauri Deshpandey	-	The Female of the Species	(Non-Detailed)
Jayant Mahapatra	-	Dawn at Puri	(Detailed)
or			
K. N. Daruwala	-	Death by Burial	(Non-Detailed)
Shiv K. Kumar	-	Indian Women	(Non-Detailed)

UNIT-IV Prose

Nirad C. Choudhary	-	My Birth Place	(Detailed)
Dr. S. Radhakrishnan	-	The Call of the Suffering	(Non-Detailed)

UNIT-V Drama

Girish Karnad	-	Hayavadana	(Detailed)
or			
Vijay Tendulkar	-	Silence! The Court is in Session	(Non-Detailed)

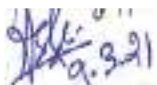
UNIT- VI Fiction

R.K. Narayan	-	The Guide	(Non-Detailed)
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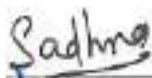
UNIT-VII

1. Lyric
2. Subjective Poetry
3. Couplet
4. Fable
5. Hymn
6. Allegory
7. Autobiography













BOOK RECOMMENDED:

1. Indian Poetry in English, Ed. Hari Mohan Prasad, Sterling Publication
2. An Introduction to the Study of English Literature, B. Prasad.
3. A Glossary of Literary Terms, M. H. Abrahams.
4. Prose of Today - Macmillan Publishers

Prasad
07/03/2021

Prasad
07/03/2021

Prasad

Sadhna

Prasad
07/03/2021

Prasad
07/03/2021

Paper-II
(A) AMERICAN LITERATURE
(Paper Code -0236)

M.M.: 75

All questions are compulsory.

- Note: 1. Unit -I is compulsory. Two passages from each of the Unit II to V to be set Three to be attempted. **(3x5 = 15)**
2. Short answer questions from unit VII, Seven to be set and five to be attempted. **(5x2 = 10)**
3. Long-answer questions from unit II to VI. (Word limit for each answer is 300-400 words) Internal choice to be given. **(5x10 = 50)**

UNIT-I

Annotations and short answer question.

UNIT-II Poetry

- Walt Whitman - O Captain! My Captain, When the Lilacs Last in the Dooryard Bloom'd. (Non-Detailed)
- Carl Sandberg - Who Am I? I am the People, The Mob (Detailed)

UNIT-III

- Emily Dickinson - "Hope" is the thing with Feather, I Felt a funeral in my Brain (Detailed)
- E. E. Cummings - The Cambridge Ladies, As Freedom is a Breakfast food (Detailed)

UNIT-IV Prose

- William Faulkner - Nobel Award Acceptance Speech (Detailed)
- W. Carlos Williams - In the American Grain (Non-Detailed)
- Walt Whitman - Preface to "Leaves of Grass" (Detailed)

UNIT-V Drama

- A. Miller - All My Sons (Non-Detailed)
- Or
- Eugene O' Neill - The Hairy Ape (Detailed)

UNIT-VI Fiction

- E. Hemingway - A Farewell to Arms (Non-Detailed)
- Or
- W. Faulkner - The Sound and the Fury (Non-Detailed)

- UNIT-VII** 1. Naturalism 2. Realism 3. Art for Art's sake 4. Poetic-Drama
5. Symbolism 6. American Renaissance 7. Existentialism.

BOOK RECOMMENDED:

- 1- American Literature, An Anthology, Ed. Fr. Egbert S. Oliver.
2- A Glossary of Literary Terms - M.H. Abrahams.

Prakash
21/03/21

Prakash
21-3-21

Prakash

Sadhna

Prakash
21-3-21

Prakash
21/03/21

Paper-II

(B) 20TH CENTURY LITERATURE IN ENGLISH

(Paper Code -0237)

M.M.: 75

The paper will be taught as an optional paper to Paper-II (A) which is a paper on American Literature. It is to give to the students a general background and cultural history of this period and also to make them aware of the literary trends of the twentieth century. The Paper comprises of six units and in all Six questions are to be attempted.

UNIT-I The following historical and literary topics will be included in this unit. Students are required to write short notes of not more than three hundred words on any two of the following topic.

(10 Marks)

- i) The Two World Wars
- ii) The Russian Revolution
- iii) The Great Depression
- iv) The Vietnam War.
- v) Freudian Thought
- vi) Existentialism.
- vii) Absurdism.
- viii) Modernism and Post Modernism.
- ix) New Development in Fiction and Drama.

UNIT-II Ten objective type questions on the life history and major poetical works of the following Poets of the twentieth century will be asked in this unit.

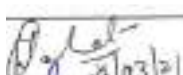
(10 Marks)

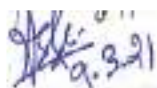
- i) W. B. Yeats (1865-1939)
- ii) Siegfried Sasson (1886-1967)
- iii) Rupert Brooke (1887-1915)
- iv) T.S. Eliot (1888-1965)
- v) Wilfred Owen (1893-1918)
- vi) W.H. Auden (1907-1937)
- vii) Louis MacNeice (1907-1963)
- viii) Stephen Spender (1909-1995)
- ix) Dylan Thomas (1914-1953)
- x) Philip Larkin (1922-1985)


UNIT-III

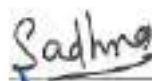
(15 marks)

T.S. Eliot	-	The Waste Land
	Or	
Wilfred Owen	-	Disabled
Siegfried Sassoon	-	Attack, Falling Asleep
Rupert Brooke	-	The Hill
W. H. Auden	-	Miss Gee













UNIT-IV**(15 marks)**

Joseph Conrad

- Heart of Darkness

Or

Chinua Achebe

- Things Fall Apart

UNIT-V Non Fictional Prose**(10 marks)**

Virginia Woolf

- The Death of the Moth

Or

Graham Greene

- The Lost Childhood

UNIT-VI Drama**(15 marks)**

Bernard Shaw

- Pygmalion

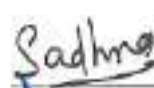
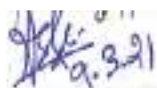
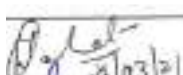
Or

Samuel Beckett

- Waiting for Godot

BOOK RECOMMENDED:

1. Edited by Michael Roberts, The Faber Book of Modern Verse.
2. Macmillan, Prose of Today.
3. William J. Long, English Literature.



HEMCHAND YADAV VISHWAVIDYALAYA, DURG (C.G.)

REVISED SYLLBUS

B. A. Part- III (Economics)

Subject: Development and Environmental Economics, Paper-I

UNIT 1

Economic Growth and Development: Factor affecting economic growth (Labour, capital and technology), Developed and under developed Economy, Poverty-absolute & relative, Marxian model of Economic Growth, Mahalanobis Model of Economic Growth. Balanced and unbalanced growth.

UNIT 2


Problems of Population and growth pattern of population. Theory of demographic transition. Population, poverty and environment. Schumpeter's theory of economic growth, Theory of Big-Push, Nelson's theory of low-level income equilibrium trap , Theory of Critical minimum efforts ,

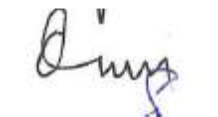
UNIT 3

Harrod and Domar growth model, Solow's model of economic growth, Meades Neo classical models, , Mrs. Joan Robinson's growth model , A. Lewis theory of unlimited supply of labour.

UNIT 4


Environment: Environmental and use, environmental disruption as an allocation, problem. valuation of environmental damages- land, water , air & forest , prevention control and abatement of pollution, choice of policy instruments in developing countries, environmental legislation, indicators of sustainable development, environmental accounting


डॉ० अनंदा कुमर


डॉ० अनंदा कुमर


डॉ० अनंदा कुमर


डॉ० अनंदा कुमर


डॉ० अनंदा कुमर

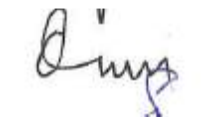
UNIT 5

Concept of Intellectual Capital : Food Security, Education, Health & Nutrition, Role of agriculture in economic development, Land reforms, Efficiency & Productivity in Agriculture, new technology & Sustainable agriculture, Globalization & agriculture growth, the choice of technique appropriate technology & employment.


Reference :-


1. Behrman, S. And T.N. Shrinivasan (1995) "Hand book of Development Economics," Vol 1, 2, & 3 Elsevier; Amsterdam.
2. Ghatak, S (1986) "An introduction to development Economics", Allen & Elnein, London.
3. Sen, A.K. (Ed.) 1990 "Growth Economics", Penguin, Harmonds worth.
4. Mehrotra, S. And J. Richard (1998), Development with a Human Face, Oxford University Press new Delhi.


डॉ० पी.एस. चक्रवर्ती


डॉ० डी.पी. चक्रवर्ती


डॉ० एन.एस. चक्रवर्ती


डॉ० एम.एस. चक्रवर्ती


डॉ० एर.एस. चक्रवर्ती

HEMCHAND YADAV VISHWAVIDYALAYA, DURG (C.G.)

REVISED SYLLBUS

B.A. Part- III (Economics)

Subject: Statistical Methods, Paper-II

UNIT 1

Statistics : Definition of Statistics, Importance and Limitations of Statistics, Importance of Statistics in Economics, Statistical investigation, Census and sampling methods of statistical investigation, Statistical data, Collections of Data, Primary & Secondary Data.

UNIT 2

Measuring of Central Tendency: Mean, Median, Mode, measures of Skewness, Probability-basic concepts meaning and definitions

UNIT 3


Dispersion: Meaning of Dispersion, Methods of measuring Dispersion, Range, Quartiles Deviation ,Mean Deviation, Coefficient of Mean Deviation, Standard Deviation.

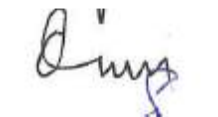
UNIT 4

Correlation Analysis: Meaning and types of correlation ,Degree of correlation, Coefficient of correlation-Karl Pearson's Method, Spearman's Rank Difference Method. Probable error and standard error.


UNIT 5


Index Number- Methods of constructing of Index Numbers, Fisher's methods, Dorbish-Bowles method, Paasches method, Laspeyres method, Consumer price index numbers, Reversal test, Circular Test, Time series analysis-Meaning, Components of time series, Measurement of long term trend by average method.


डॉ० अनंदा कुमर


डॉ० डी.पी.सिंह



डॉ० अनंदा कुमर

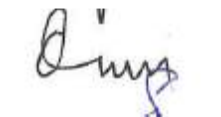

डॉ० अनंदा कुमर



डॉ० अनंदा कुमर

Reference :-


1. Shukla, S.M. and S.P. Sahay - "Quantitative Methods" Sahitya Bhawan Publication, Agra.
2. Agrawal, D.R., "Quantitative Methods", Vrinda Publications (P) Ltd.
3. Sancheti, D.C., "Quantitative Methods", Sultanchand and Sons, New Delhi.
4. Gupta, S.P. and others, "Quantitative Techniques", Sultanchad and Sons, New Delhi.
5. मेहता एवं मदनानी, अर्थशास्त्र में प्रारंभिक गणित, लक्ष्मीनारायण अग्रवाल, आगरा-3
6. Dr. Amrendra, "An Introduction to Mathematical concepts in Economics", Pragtisheel Prakashan, New Delhi.


डॉ० रामेश अग्रवाल


डॉ० डी.पी. सिंह


डॉ० मनीष कुमार


डॉ० सुभाष अग्रवाल

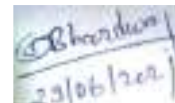
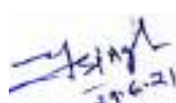

डॉ० रमेश प्रसाद

B.A. /B. Sc. Part III
PAPER - I
REMOTE SENSING AND GIS
Max. Marks: 50

- Unit I** Basics of Remote Sensing: definition, history, and Scope; Electro-magnetic Radiation: Characteristics, Spectral regions and Bands; Interaction with earth surface features and atmosphere; Spectral Signature.
- Unit II** Types of Remote Sensing: Air borne and Space borne; Aerial photos: Types and Characteristics; Remote Sensing satellites: Platforms and sensors: active and passive, sensor characteristics: spatial resolution, spectral resolution, radiometric resolution, temporal resolution. Product.
- Unit III** Visual and Digital image processing techniques; Remote Sensing application in resource mapping and environmental monitoring, remote sensing in India: development and Growth. Indian Satellites, Space Organizations and data products.
- Unit IV** Introduction of GIS: Definition of Geoinformatics, Scope and Importance of Geoinformatics, History of GIS, Components of GIS, Functions of GIS, GIS tasks- Input, Manipulation, Management, Query analysis, Visualization, Toposheets, Surveying, Aerial photographs, Satellite data and images, Data types- Spatial and Non spatial.
- Unit V** Data model and data analysis: Raster data and their characteristics, Vector data and their characteristics, Raster data analysis- grid cells or Pixels. Vector data analysis- Spatial data, Generation in Vector Format, Spatial and Non –Spatial data Management. Spatial information Technology

Books Recommended:

1. Bhatta, B. (2010): Remote Sensing and GIS, Oxford University Press, New Delhi.
2. Campbell, J.B. (2002): Introduction to Remote Sensing. 5th edition, Taylor and Francis, London
3. Curran, P.J. (1985): Principles of Remote Sensing, Longman, London
4. Kang-tsung Chang (2003) Geographic Information Systems, Tata McGraw Hill, New Delhi
5. Lillesand, T.M. and Kiefer, R.W. (2000): Remote Sensing and Image Interpretation. 4th edition. John Wiley and Sons, New York
6. Lo Albert, C.P., and Young, K.W (2003) Concepts and Techniques of Geographical Information Systems, Prentice Hall of India Pvt. Ltd., New Delhi.
7. Nag Prithvish and Kudrat M. (1998): Digital Remote Sensing, Concept Publishing Company, New Delhi
8. Star J, and J. Estes, (1994), Geographic Information Systems: An Introduction, Prentice Hall, New Jersey.
9. Williams J. (1995): Geographic information from space, John Wiley and Sons, England,

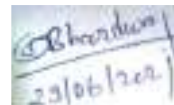
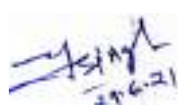


B.A./B.Sc Part III
PAPER - II
GEOGRAPHY OF CHHATTISGARH
Max. Marks: 50

- Unit I** Physical Features : Geological Structure, Relief and Physiographic Regions, Drainage, Climate.
- Unit II** Natural Resources : Soils – Types, characteristics and their Distribution. Water Resources (Major Irrigation and Hydel Power Projects), Forests-types, Distribution, Conservation of Forest. Mineral Resources-iron-ore, Coal, Dolomite Lime stone, Bauxite, etc. Power Resources of Chhattisgarh.
- Unit III** Agriculture and Populations – Agriculture: Cereals, Pulses and other crops. Population: Growth, Distribution, and Density; Tribal Populations; and Urban and Rural Population.
- Unit IV** Industries - Iron and Steel, Cement, Sugar, Aluminum; Industrial Regions of Chhattisgarh.
- Unit V** Trade and Transport, Tourism, Socio-Economic Development of Chhattisgarh.

Books Recommended:

1. Jha, Vibhash Kumar and Saumya Naiyyar (2013) Chhattisgarh Samagra, Chhattisgarh Rajya Hindi Granth Akadmi, Raipur
2. Kumar, Pramila (2003): Chhattisgarh Ek Bhugolik Addhyayan. Madhya Pradesh Hindi Granth Akadmi, Bhopal
3. Nagesh Jitendra and at all (2014): Chhattisgarh Sandarbh 2014 Jansanmpark Vibhag, C.G. Govt., Raipur
4. Tiwari, Vijay Kumar (): Geography of Chhattisgarh, Himalya Publishing House, Pvt. Ltd
5. Tripathi, Kaushlendra and Pursottam Chandrakar (2001): Geography of Chhattisgarh, Shardaprkashan, Aazad Nagar , Bilaspur.
6. Verma ,L.N. (2017): Geography of Chhattisgarh, Madhya Pradesh Hindi Granth Akadmi, Bhopal



B.A./B.Sc Part III

PAPER - III

PRACTICAL GEOGRAPHY

Max. Marks: 50

SECTION A

MAP READINGS AND INTERPRETATION

(M.M. 20)

Unit I Graphical Representation: Band graph, Climograph, Square root, Cube-root.

Unit II Topographical Sheets: Classification and numbering system (National and International), Interpretation of Topographical Sheets with respect to cultural and physical features.

Unit III Satellite Imageries: Describing the Marginal Information, Image interpretation: Visual Methods –Landuse /Landcover Mapping. Use and Application of GPS.

SECTION B

SURVEYING AND FIELD REPORT

(M.M.20)

Unit IV Surveying: Plane Table Survey, Basic Principles of plane table surveying, Plane table survey including intersection and resection.

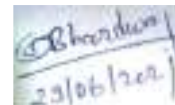
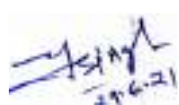
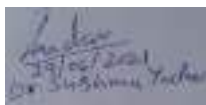
Unit V Field work and field report: physical, social and economic survey of a micro-region.

PRACTICAL RECORD AND VIVA VOCE

(M.M.10)

Books Recommended:

1. Archer, J.E. and Dalton, T.H. (1968): *Field Work in Geography*. William Clowes and Sons Ltd. London and Beccles.
2. Bolton, T. and Newbury, P.A. (1968): *Geography through Fieldwork*. Blandford Press, London.
3. Campell, J. B. (2003): *Introduction to Remote Sensing*. 4th edition. Taylor and Francis, London.
4. Chaunial, D. D. (2004): *Remote Sensing and Geographical Information System(in Hindi)*, Sharda Pustak Bhawan, Allahabad
5. Cracknell, A. and Ladson, H. (1990): *Remote Sensing Year Book*. Taylor and Francis, London.
6. Curran, P.J. (1985): *Principles of Remote Sensing*. Longman, London.
7. Davis, R.E. and Foote, F.S. (1953): *Surveying*, 4th edition, McGraw Hill Publication, New York
8. `
9. Deekshatulu, B.L. and Rajan, Y.S. (ed.) (1984): *Remote Sensing*. Indian Academy of Science, Bangalore.
10. Floyd, F. and Sabins, Jr. (1986): *Remote Sensing: Principles and Interpretation*. W.H. Freeman, New York.
11. Gautam, N.C. and Raghavswamy, V. (2004). *Land Use/ Land Cover and Management Practices in India*. B.S. Publication., Hyderabad.



12. Jensen, J.R. (2004): Remote Sensing of the Environment: An Earth Resource Perspective. Prentice-Hall, Englewood Cliffs, New Jersey. Indian reprint available.
13. Jones, P.A.(1968): Fieldwork in Geography, Longmans, Green and Company Ltd., First Publication, London
14. Kanetker, T.P. and Kulkarni, S.V.(1967): Surveying and Levelling, Vol I and II V.G. Prakashan, Poona.
15. Lillesand, T.M. and Kiefer, R.W. (2000): Remote Sensing and Image Interpretation. John Wiley and Sons, New York.
16. Monkhouse, F. J. (1985): Maps and Diagrams. Methuen, London.
17. Nag, P. (ed.) (1992): Thematic Cartography and Remote Sensing. Concept Publishing Company, New Delhi.
18. Natrajan, V. (1976): Advanced Surveying, B.I. Publications., Mumbai.
19. Rampal, K.K. (1999): Handbook of Aerial Photography and Interpretation. Concept Publishing. Company, New Delhi.
20. Raisz, E. (1962): Principles of Cartography, McGraw Hill, New York.
21. Robinson, A. H., Sale. R. D., Morrison, J. L. and Muehrcke, P. C. (1984): Elements of Cartography. 5th edition, John Wiley and Sons, Inc. New York.
22. Sarkar, A. K. (1997): Practical Geography: A Systematic Approach. Orient Longman, Kolkata
23. Sharma, J. P. (2001): *Prayogik Bhugol.*, Rastogi Publication, Meerut 3rd. edition.
24. Singh, R.L. and Singh Rana P.B. (1993): *Elements of Practical Geography.* (Hindi and English editions). Kalyani Publishers, New Delhi.
25. Stoddard, Robert H. (1982): *Field Techniques and Research Methods in Geography.* Kendall/Hunt Pub. Dubuque IO.

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बी.ए./बी.एस.सी. तृतीय वर्ष
प्रश्न पत्र-प्रथम
सुदूर संवेदन एवं भौगोलिक सूचना प्रणाली

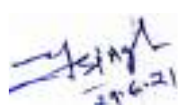
अधिकतम अंक: 50

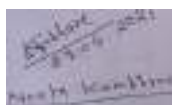
- इकाई -1 :** सुदूर संवेदन का अर्थ तथा आधारभूत संकल्पना : परिभाषा, इतिहास, एवं विषय क्षेत्र; विद्युत चुम्बकीय विकिरण : विशेषताएँ, वर्णक्रमीय (SPECTRAL) प्रदेश एवं बैंड; पृथ्वी के धरातल एवं वायुमण्डल के साथ विकिरण अर्जा की अन्योन्यक्रिया, वर्णक्रमीय (SPECTRAL)लक्षण ।
- इकाई -2 :** सुदूर संवेदन के प्रकार : वायु जनित एवं अंतरिक्ष जनित; हवाई छायाचित्र : प्रकार एवं विशेषताएँ; सुदूर संवेदन उपग्रह : प्लेटफार्म एवं संवेदक : सक्रिय एवं निष्क्रिय, संवेदक की विशेषताएँ : स्थानिक विभेदन, वर्णक्रमीय (SPECTRAL) विभेदन, रेडियोमेट्रिक विभेदन, अल्पकालिक विभेदन, उत्पाद ।
- इकाई -3 :** चाक्षुष एवं अंकीय बिम्ब प्रक्रियान्वयण तकनीक; संसाधन मानचित्रण एवं पर्यावरण नियंत्रण में सुदूर संवेदन अनुप्रयोग, भारत में सुदूर संवेदन; उद्भव एवं विकास ।
- इकाई -4 :** भौगोलिक सूचना प्रणाली का परिचय : भूसूचना की परिभाषा, भूसूचना का महत्व एवं विषय क्षेत्र, भौगोलिक सूचना प्रणाली का इतिहास, जी0 आई0 एस0 की संकल्पना, जी0 आई0 एस0 के कार्य - आंकड़ा प्रवेश, संचालन, परिचालन, प्रबंधन, त्रुटि संसूचन, विश्लेषण एवं प्रदर्शन, धरातलपत्रक, सर्वेक्षण, हवाई बिम्ब, उपग्रह आंकड़े एवं बिम्ब, आंकड़ों के प्रकार धरातलीय एवं अधरातलीय या लाक्षाणिक ।
- इकाई-5 :** आंकड़ा मॉडल एवं आंकड़ा विश्लेषण : रॉस्टर आंकड़ा एवं उसकी विशेषताएँ, वेक्टर आंकड़ा एवं उसकी विशेषताएँ, रास्टर आंकड़ा विश्लेषण : ग्रिड सेल अथवा पिक्सल, वेक्टर आंकड़ा विश्लेषण धरातलीय आंकड़ा, वेक्टर प्रारूप की रचना धरातलीय एवं अधरातलीय आंकड़ा प्रबंधन, धरातलीय सूचना तकनीक ।

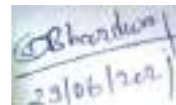
Books Recommended:

1. Bhatta, B. (2010): Remote Sensing and GIS, Oxford University Press, New Delhi.
2. Campbell, J.B. (2002): Introduction to Remote Sensing. 5th edition, Taylor and Francis, London
3. Curran, P.J. (1985): Principles of Remote Sensing, Longman, London
4. Kang-tsung Chang (2003) Geographic Information Systems, Tata McGraw Hill, New Delhi
5. Lillesand, T.M. and Kiefer, R.W. (2000): Remote Sensing and Image Interpretation. 4th edition. John Wiley and Sons, New York
6. Lo Albert, C.P., and Young, K.W (2003) Concepts and Techniques of Geographical Information Systems, Prentice Hall of India Pvt. Ltd., New Delhi.
7. Nag Prithvish and Kudrat M. (1998): Digital Remote Sensing, Concept Publishing Company, New Delhi
8. Star J, and J. Estes, (1994), Geographic Information Systems: An Introduction, Prentice Hall, New Jersey.
9. Williams J. (1995): Geographic information from space, John Wiley and Sons, England,
10. चौनियाल, देवी दत्त (2004), सुदूर संवेदन एवं भौगोलिक सूचना प्रणाली, शारदा पुस्तक भवन, इलाहाबाद-2.











बी.ए./बी.एस.सी. तृतीय वर्ष
प्रश्न पत्र—द्वितीय
छत्तीसगढ़ का भूगोल

अधिकतम अंक : 50

- इकाई –1. भौतिक स्वरूप भौमिकीय संरचना उच्चावच, भूआकृतिक प्रदेश, अपवाह, जलवायु ।
- इकाई –2. प्राकृतिक संसाधन—मिट्टी, प्रकार, विशेषताएँ, वितरण, जलसंसाधन: प्रमुख सिंचाई और बहुउद्देशीय परियोजनाएँ, वन : प्रकार, वितरण, वनों का संरक्षण, खनिज संसाधन – लौह अयस्क, कोयला डोलोमाइट, चुना पत्थर और बाक्साइट छत्तीसगढ़ में शक्ति के संसाधन ।
- इकाई –3. कृषि— प्रमुख खाद्यान्न फसलें, दलहन एवं अन्य फसलें, जनसंख्या— वृद्धि, वितरण और घनत्व, जनजातिय जनसंख्या । ग्रामीण और नगरीय जनसंख्या ।
- इकाई –4. उद्योग, लौह इस्पात उद्योग, सिमेंट चीनी, एल्युमिनीयम, छत्तीसगढ़ के औद्योगिक प्रदेश ।
- इकाई –5. व्यापार, परिवहन, पर्यटन, छत्तीसगढ़ का सामाजिक आर्थिक विकास ।

Books Recommended:

1. Jha, Vibhash Kumar and Saumya Naiyyar (2013) Chhattisgarh Samagra, Chhattisgarh Rajya Hindi Granth Akadmi, Raipur
2. Kumar, Pramila (2003): Chhattisgarh Ek Bhugolik Addhyayan. Madhya Pradesh Hindi Granth Akadmi, Bhopal
3. Nagesh Jitendra and at all (2014): Chhattisgarh Sandarbh 2014 Jansanmpark Vibhag, C.G. Govt., Raipur
4. Tiwari, Vijay Kumar (): Geography of Chhattisgarh, Himalya Publishing House, Pvt. Ltd
5. Tripathi, Kaushlendra and Pursottam Chandrakar (2001): Geography of Chhattisgarh, Shardaprakashan, Aazad Nagar , Bilaspur.
6. Verma ,L.N. (2017): Geography of Chhattisgarh, Madhya Pradesh Hindi Granth Akadmi, Bhopal

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29/6/21

Bhaskar
29/06/2021
Anand Chandra

Bhaskar
29/06/2021

29/6/2021
Dr. Jai Singh Sahu

बी.ए./बी.एस.सी. तृतीय वर्ष
प्रश्न पत्र—तृतीय
प्रायोगिक भूगोल

अधिकतम अंक : 50

खण्ड (अ)

मानचित्र पठन एवं निर्वचन

20

इकाई -1. बैन्ड ग्राफ, हीदर ग्राफ, क्लाइमोग्राफ, पवनारेख ।

इकाई -2. भारतीय स्थलाकृतिक मानचित्र की व्याख्या प्रकार, वर्गीकरण धरतलीय मानचित्र के प्रकार एवं विप्लेषण, राष्ट्रीय एवं अन्तरराष्ट्रीय, भौतिक एवं सांस्कृतिक तत्वों के आधार पर विप्लेषण ।

इकाई -3. उपग्रह बिम्ब : प्रारम्भिक सूचनाओं की व्याख्या बिम्ब निर्वचन : चाक्षुश विधि – भूमि उपयोग भूमि आच्छादन मानचित्रण, जी0 पी0 एस0 का उपयोग एवं अनुप्रयोग ।

खण्ड (ब)

सर्वेक्षण एवं क्षेत्रीय प्रतिवेदन

20

इकाई -4. सर्वेक्षण , समपटल सर्वेक्षण, प्रतिच्छेदन एवं स्थिति निर्धारण ।

इकाई -5. भूगोल में क्षेत्रीय कार्य का महत्व किसी छोटे क्षेत्र का भौतिक सामाजिक आर्थिक सर्वेक्षण और रिपोर्ट तैयार करना ।

प्रायोगिक पुस्तिका और मौखिक परिक्षण परीक्षा

10

Books Recommended:

1. Archer, J.E. and Dalton, T.H. (1968): *Field Work in Geography*. William Clowes and Sons Ltd. London and Beccles.
2. Bolton, T. and Newbury, P.A. (1968): *Geography through Fieldwork*. Blandford Press, London.
3. Campell, J. B. (2003): *Introduction to Remote Sensing*. 4th edition. Taylor and Francis, London.
4. Chaunial, D. D. (2004): *Remote Sensing and Geographical Information System*(in Hindi), Sharda Pustak Bhawan, Allahabad
5. Cracknell, A. and Ladson, H. (1990): *Remote Sensing Year Book*. Taylor and Francis, London.
6. Curran, P.J. (1985): *Principles of Remote Sensing*. Longman, London.
7. Davis, R.E. and Foote, F.S. (1953): *Surveying*, 4th edition, McGraw Hill Publication, New York
8. `
9. Deekshatulu, B.L. and Rajan, Y.S. (ed.) (1984): *Remote Sensing*. Indian Academy of Science, Bangalore.
10. Floyd, F. and Sabins, Jr. (1986): *Remote Sensing: Principles and Interpretation*. W.H. Freeman, New York.
11. Gautam, N.C. and Raghavswamy, V. (2004). *Land Use/ Land Cover and Management Practices in India*. B.S. Publication., Hyderabad.
12. Jensen, J.R. (2004): *Remote Sensing of the Environment: An Earth Resource Perspective*. Prentice-Hall, Englewood Cliffs, New Jersey. Indian reprint available.
13. Jones, P.A.(1968): *Fieldwork in Geography*, Longmans, Green and Company Ltd., First Publication, London

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Bhondal
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Dr. Jai Singh Sahni

14. Kanetker, T.P. and Kulkarni, S.V.(1967): Surveying and Levelling, Vol I and II V.G. Prakashan, Poona.
15. Lillesand, T.M. and Kiefer, R.W. (2000): Remote Sensing and Image Interpretation. John Wiley and Sons, New York.
16. Monkhouse, F. J. (1985): Maps and Diagrams. Methuen, London.
17. Nag, P. (ed.) (1992): Thematic Cartography and Remote Sensing. Concept Publishing Company, New Delhi.
18. Natrajan, V. (1976): Advanced Surveying, B.I. Publications., Mumbai.
19. Rampal, K.K. (1999): Handbook of Aerial Photography and Interpretation. Concept Publishing. Company, New Delhi.
20. Raisz, E. (1962): Principles of Cartography, McGraw Hill, New York.
21. Robinson, A. H., Sale. R. D., Morrison, J. L. and Muehrcke, P. C. (1984): Elements of Cartography. 5th edition, John Wiley and Sons, Inc. New York.
22. Sarkar, A. K. (1997): Practical Geography: A Systematic Approach. Orient Longman, Kolkata
23. Sharma, J. P. (2001): *Prayogik Bhugol.*, Rastogi Publication, Meerut 3rd. edition.
24. Singh, R.L. and Singh Rana P.B. (1993): *Elements of Practical Geography.* (Hindi and English editions). Kalyani Publishers, New Delhi.
25. Stoddard, Robert H. (1982): *Field Techniques and Research Methods in Geography.* Kendall/Hunt Pub. Dubuque IO.

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SOCIOLOGY
B.A. PART- III
PAPER- I
FOUNDATIONS OF SOCIOLOGICAL THOUGHT

- UNIT-I** **August Comte:** The Law of Three Stages, Positivism, Hierarchy of Science.
Durkheim: Social Solidarity and Suicide
- UNIT-II** **Karl Marx:** Dialectic Materialism, Class Struggle and Surplus value.
Max Weber: Bureaucracy, Authority and the Protestant Ethic and the spirit of Capitalism.
- UNIT-III** **Pareto:** Circulation of Elits and Logical and Nonlogical action.
Spencer: Social Darwinism, Superorganic evolutions.
- UNIT-IV** **Thorstein Veblen:** The Theory of Leisure Class, Theory of Social Change
R.K. Morton: Functionalism and Reference Group.
- UNIT-V** **Development of Sociological thought in India:-**
Mahatma Ghandhi : Ahimsa, Satya Graha and Trusteeship.
RadhaKamal Mukherjee: The Concept of Value.

ESSENTIAL READINGS-

1. Barres, H.E.: Introduction to the sociology, Chicago the University of Chicago press 1959.
2. Coser, Levis a.: Master of Sociological thought, New York Harcourt Brace Jovanovich 1979.
3. Singh, Yogendra- Indian sociology: social conditioning and emerging friends. New Delhi vistaar 1986.
4. Zeitlin, Irving- (Indian edition) Rethinking sociology: A critigue of contemporary theory, Jorpur Rawl 1999.



Dr. Sagar Kaur

SOCIOLOGY
B.A. PART- III
PAPER- II
METHODS OF SOCIAL RESEARCH

- UNIT-I** **Social Research: Meaning, Characteristics and Significance.**
Scientific Methods, Hypothesis.
- UNIT-II** **Qualitative Research:** Ethnography, Observation, Case Study, Content analysis.
- UNIT-III** **Research design:** Exploatory, Descriptive, Explanatory, Experimental and Diagnostic.
- UNIT-IV** **Tools and Techniques of Social Research:** Social Survey, Sampling, Questionnaire, Interview- Schedule and Interview - Guide
- UNIT-V** **Social Statistics:** Meaning, Importance and Limitations.
Graphs, Diagram and Measures of Central Tendency- Mean, Mode, Median, Co-relation, Use of Computer in Social Research.

ESSENTIAL READINGS-

01. Young, P.V. (1977). Scientific Social Surveys and Research. Prentice Hall of India. New Delhi.
02. Bruce, C., & Margaret, M. (1993). Approaches to Social Research, New York: Oxford University Press.
03. Cohen, M & Nagel, E. (1994). An Introduction to Logi and Scientific Metod. New York: Harcourt, Brace & Company.
04. Forcese, D., & Richer, S. (1973). Social Research Methods. Cliffs: Englewood, Cliffs, NJ.
05. Moser, C.A. (1962). Survey Methods in Social Research Investigation. London: Heinemann, Printce Hall.
06. Goode, & Hatt. (1952). Methods in Social Research. New York: MC Graw Hill Publishers.



Dr. Sagra Kaur

REVISED ORDINANCE No. 23
(As per State U.G.C. Scheme)

BACHELOR OF COMMERCE

1. The three-year course has been broken up into three Parts.
Part-I known as B.Com. Part-I Examination at the end of the first year.
Part-II Examination at the end of the second year
Part-III Examination at the end of the third year.
2. A candidate who after passing (10+2) Higher Secondary or Intermediate examination of C.G. Board of Secondary Education, C.G. or any other examination recognized by the University or C.G. Board of Secondary Education as equivalent thereto, has attended a regular course of study in an affiliated college or in the Teaching Department of the University for one academic year shall be eligible for appearing at the B.Com Part-I examination.
3. A candidate who after passing B.Com. Part-I examination of the University or any other examination recognized by the University as equivalent thereto has attended a regular course of study for one academic year in an affiliated college or in the Teaching Department of the University shall be eligible for appearing at the B.Com. Part-II examination.
4. A candidate who after passing B.Com. Part-II examination of the University has completed a regular course of study for one academic year in an affiliated college or in the Teaching Department of the University shall be eligible for appearing at the B.Com. Part-III examination.
5. Besides regular students, subject to their compliance with this Ordinance, ex-students and non-collegiate students shall be eligible for admission to the examination as per provisions of Ordinance No. 6 relating to Examinations (General).

Provided that non-collegiate candidates shall be permitted to offer only such subjects/papers as are taught to the regular students at any of the University Teaching Department or College.

6. Every candidate for B.Com. examination shall be examined in subjects as mentioned in the marking scheme and course of studies.
7. A candidate who has passed the B.Com. Part-III examination of the University shall be allowed to present himself for examination in any of additional subjects prescribed for the B.Com. examination and not taken by him at the degree examination. Such candidate will have to first appear and pass the B.Com., Part I examination in the subject which he proposes to offer and then the B.Com. Part-II and Part-III examination in the same subject. Successful candidate will be given a certificate to that effect.
8. In order to pass at any part of the three-year degree course examination, an examinee must obtain not less than 33% of the total marks in each paper/group of subjects. In-group where both theory and practical examinations are provided an examinee must pass in both theory and practical part of examination separately.
9. Candidate will have to pass separately at the Part-I, Part-II and Part-III examination. No division shall be assigned on the result of the Part-I and Part-II examinations. In determining the division of the Final examination, total marks obtained by the examinees in their Part-I, Part-II and Part-III examination in the aggregate shall be taken into account. Candidate will not be allowed to change subjects after passing Part-I Examination.

Provided in case of candidate who has passed the examination through the supplementary examination having failed in one subject group only the total aggregate marks being carried over for determining the division, shall include the actual marks obtained in the subject group in which he appeared at the supplementary examination.
10. Successful examinees at the Part-III examination obtaining 60% or more marks shall be placed in the First division, those obtaining less than 60% but not less than 45% marks in the Second division and other successful examinees in the Third division.

B.COM. PART-III
SCHEME OF EXAMINATION

Subject	Max. Marks	Min Marks
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A. FOUNDATION COURSE-

(a) Hindi Language	75	150	50
(b) English Language	75		

B. COMPULSORY CORE COURSE:

i Income Tax	75		25
ii Indirect Tax	75		25
iii Management Accounting	75		25
iv Auditing	75		25

and any one of the following Continuation Optional Group.

OPTIONAL GROUP – A

i Financial Management	75		25
ii Financial Marketing	75		25

OPTIONAL GROUP – B

i Principle of Management	75		25
ii International Market	75		25

OPTIONAL GROUP – C

i Information Technology and its Applications in Business	75		25
ii Essentials of E-Commerce	75		25

OPTIONAL GROUP – D

i Fundamentals of Insurance	75		25
ii Money & Banking System	75		25

USE OF CALCULATORS

The Students of Degree/P.G. Classes will be permitted to use of Calculators in the examination hall from annual 1986 examination on the following conditions as per decision of the standing committee of the Academic Council at its meeting held on 31-01-1986

1. Student will bring their own Calculators.
2. Calculators will not be provided either by the university or examination centres
3. Calculators with, memory and following variables be permitted +, -, x, % square, reciprocal, exponents log, square root, trigonometric functions, viz, sine, cosine, tangent etc. Factorial summation, xy, yx, and in the light of objective approval of merits and demerits of the viva only will be allowed.

Part - I
SYLLABUS FOR ENVIRONMENTAL STUDIES AND HUMAN RIGHTS
(Paper code-0828)

MM. 75

इन्वारमेंटल साईंसेस के पाठ्यक्रम को स्नातक स्तर भाग—एक की कक्षाओं में विश्वविद्यालय अनुदान आयोग के निर्देशानुसार अनिवार्य रूप से शिक्षा सत्र 2003—2004 (परीक्षा 2004) से प्रभावशील किया गया है। स्वशासी महाविद्यालयों द्वारा भी अनिवार्य रूप से अंगीकृत किया जाएगा।

भाग 1, 2 एवं 3 में से किसी भी वर्ष में पर्यावरण प्रश्न—पत्र उत्तीर्ण करना अनिवार्य है। तभी उपाधि प्रदाय योग्य होगी।

पाठ्यक्रम 100 अंकों का होगा, जिसमें से 75 अंक सैद्धांतिक प्रश्नों पर होंगे एवं 25 अंक क्षेत्रीय कार्य (Field Work) पर्यावरण पर होंगे।

सैद्धांतिक प्रश्नों पर अंक — 75 (सभी प्रश्न इकाई आधार पर रहेंगे जिसमें विकल्प रहेगा)

- | | | |
|----------------------|---|--------|
| (अ) लघु प्रश्नोंत्तर | — | 25 अंक |
| (ब) निबंधात्मक | — | 50 अंक |

Field Work — 25 अंकों का मूल्यांकन आंतरिक मूल्यांकन पद्धति से कर विश्वविद्यालय को प्रेषित किया जावेगा। अभिलेखों की प्रायोगिक उत्तर पुस्तिकाओं के समान संबंधित महाविद्यालयों द्वारा सुरक्षित रखेंगे।

उपरोक्त पाठ्यक्रम से संबंधित परीक्षा का आयोजन वार्षिक परीक्षा के साथ किया जाएगा।

पर्यावरण विज्ञान विषय अनिवार्य विषय है, जिसमें अनुत्तीर्ण होने पर स्नातक स्तर भाग—एक के छात्र/छात्राओं को एक अन्य विषय के साथ पूरक की पात्रता होगी। पर्यावरण विज्ञान के सैद्धांतिक एवं फील्ड वर्क के संयुक्त रूप से 33: (तीस प्रतिशत) अंक उत्तीर्ण होने के लिए अनिवार्य होंगे।

स्नातक स्तर भाग—एक के समस्त नियमित/भूतपूर्व/अमहाविद्यालयीन छात्र/छात्राओं को अपना फील्ड वर्क सैद्धांतिक परीक्षा की समाप्ति के पश्चात् 10 (दस) दिनों के भीतर संबंधित महाविद्यालय/परीक्षा केन्द्र में जमा करेंगे एवं महाविद्यालय के प्राचार्य/केन्द्र अधीक्षक, परीक्षकों की नियुक्ति के लिए अधिकृत रहेंगे तथा फील्ड वर्क जमा होने के सात दिनों के भीतर प्राप्त अंक विश्वविद्यालय को भेजेंगे।

UNIT-I THE MULTI DISCIPLINARY NATURE OF ENVIRONMENTAL STUDIES

Definition, Scope and

Importance Natural Resources:

Renewable and Nonrenewable Resources

- (a) Forest resources: Use and over-exploitation, deforestation, Timber extraction, mining, dams and their effects on forests and tribal people and relevant forest Act.
- (b) Water resources: Use and over-utilization of surface and ground water, floods drought, conflicts over water, dam' s benefits and problems and relevant Act.
- (c) Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources.
- (d) Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity.
- (e) Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources.
- (f) Land resources: Land as a resource, land degradation, man induced landslides soil erosion and desertification.

(12 Lecture)

UNIT-II ECOSYSTEM

(a) Concept, Structure and Function of and ecosystem

- Producers, consumers and decomposers.
- Energy flow in the ecosystem
- Ecological succession
- Food chains, food webs and ecological pyramids.
- Introduction, Types, Characteristics Features, Structure and Function of Forest, Grass, Desert and Aquatic Ecosystem.

(b) Biodiversity and its Conservation

- Introduction - Definition: genetic. species and ecosystem diversity
- Bio-geographical classification of India.
- Value of biodiversity: Consumptive use. Productive use, social ethics, aesthetic and option values.
- Biodiversity at global, National and local levels.
- India as mega-diversity nation.

- Hot spots of biodiversity.
- Threats to biodiversity: habitat loss, poaching of wildlife, man-wild life conflict.
- Endangered and endemic species of India.
- Conservation of biodiversity: In situ and Ex-situ conservation of biodiversity.

(12 Lecture)

UNIT- III

(a) Causes, effect and control measures of

- Air water, soil, marine, noise, nuclear pollution and Human population.
- Solid waste management: Causes, effects and control measures of urban and industrial wastes.
- Role of an individual in prevention of pollution.
- Disaster Management: floods, earthquake, cyclone and landslides.

(12 Lecture)

(b) Environmental Management

- From Unsustainable to sustainable development.
- Urban problems related to energy.
- Water conservation, rain water harvesting, watershed management.
- Resettlement and rehabilitation of people, its problems and concerns.
- Environmental ethics: Issues and possible solutions.
- Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust.
- Wasteland reclamation
- Environment protection Act: Issues involved in enforcement of environmental legislation.
- Role of Information Technology in Environment and Human Health.

UNIT- IV

General background and historical perspective- Historical development and concept of Human Rights, Meaning and definition of Human Rights, Kind and Classification of Human Rights. Protection of Human Rights under the UNO Charter, protection of Human Rights under the Universal Declaration of Human Rights, 1948. Convention on the Elimination of all forms of Discrimination against women. Convention on the Rights of the Child, 1989.

UNIT- V

Impact of Human Rights norms in India, Human Rights under the Constitution of India, Fundamental Rights under the Constitution of India, Directive Principles of State policy under the Constitution of India, Enforcement of Human Rights in India. Protection of Human Rights under the Human Rights Act, 1993- National Human Rights Commission, State Human Rights Commission and Human Rights court in India. Fundamental Duties under the Constitution of India.

Reference/ Books Recommended

1. SK Kapoor- Human rights under International Law and Indian Law.
2. HO Agrawal- Internation Law and Human Rights
3. एस.के. कपूर – मानव अधिकार
4. जे.एन. पान्डेय – भारत का संविधान
5. एम.डी. चतुर्वेदी –भारत का संविधान
6. J.N.Pandey - Constitutional Law of India
7. Agarwal K.C. 2001 Environmental Biology, Nidi pub. Ltd. Bikaner
8. Bharucha Erach, the Biodiversity of India, Mapin pub. Ltd. Ahmedabad 380013, India,
Email: mapin@icenet.net(R)
9. Bruinner R.C. 1989, Hazardous Waste Incineration. McGraw Hill Inc.480p
10. Clark R.S. Marine pollution, Clanderson press Oxford (TB)
11. Cuningham, W.P.Cooper. T.H.Gorhani, E & Hepworth. M.T,200
12. Dr. A.K.- Environmental Chemistry. Wiley Eastern Ltd.
13. Down to Earth, Center for Science and Environment (R)
14. Gloick, H.P. 1993 Water in crisis. pacific institute for studies in Deve. Environment & Security. Stockholm Eng. Institute. Oxford University, Press. m 473p.
15. Hawkins R.E. Encyclopedia of Indian Natural History, Bombay Natural History Society, Mumbai (R)

16. Heywood, V.H. & Watson, T.T.1995 Global Biodiversity Assessment, Cambridge Univ. Press 1140p
17. Jadhav H. & Bhosale, V.H. 1995 Environmental Protection and Law. Himalaya pub. House, Delhi 284p
18. Mckinney M.L.& School R.M.1996, environmental Science systems & solutions, web enhanced edition, 639p
19. Mhadkar A.K. Matter Hazardous, Techno-Science publication(TB)
20. Miller T.G.Jr. Environment Science, Wadsworth publication co. (TB)
21. Odum E.P.1971, Fundamentals of Ecology, W.B. Saunders Co. USA,574p
22. Rao M.N. & Datta, A.K. 1987, Waste water treatment. Oxford & IBH pub.co.pvt. Ltd 345p
23. Sharma B.K. 2001, Environmental chemistry, Goel pub. House, Meerut
24. Survey of the Environment, The Hidu(M)
25. Townsend C. Harper J. And Michael Begon, Essentials of Ecology, Blackwell Science(TB)
26. Trivedi R.K.Handbook of Environment Laws, Rules, Guidelines, Compliances and Standards, Vol land II, Environment Media(R)
27. Trivedi R.K. and P.K. Goel, Introduction to air pollution, Techno-Science publication (TB)
28. Wanger K.D.1998, Environmental Management. W.B. Saunders Co. Philadelphia, USA 499

बी.ए./ बी.एस-सी./ बी.कॉम./ बी.एच.एस.सी. भाग -एक

(आधार पाठ्यक्रम)

प्रथम प्रश्नपत्र

हिंदी भाषा

कोड....

पूर्णांक 75

क्रेडिट 05

पाठ्यक्रमका उद्देश्य:-

- 1.हिंदी भाषाके प्रयोजनात्मक स्वरूप का सामान्य ज्ञान प्रदान करना।
- 2.कंप्यूटर में हिंदी भाषा के प्रयोग की आवश्यकता के अनुरूप कंप्यूटर की कार्य प्रणाली की आरंभिक जानकारी से अवगत होने के लिए प्रेरित करना।
- 3.हिंदी व्याकरण की बुनियादी ज्ञान संप्रेषण कौशल तथा भाषायी दक्षता से अवगत कराना।
- 4.साहित्य और समाज को समझने की दिशा में रुझान उत्पन्न करना।

पाठ्य विषय:-

इकाई 1. (क) पल्लवन, पत्राचार, अनुवाद (ख) एक टोकरी भर मिट्टी : माधवराव सप्रे बड़े भाई साहब : प्रेमचंद	अंक 15 18 कालखंड
इकाई 2. (क) संक्षेपण, हिंदी में संक्षिप्तिकरण, हिंदी-अपठित गद्यांश, पारिभाषिक शब्दावली, हिंदी में पदनाम, मुहावरे एवंलोकोक्तियाँ (ख) जागो फिर एक बार: सूर्यकांत त्रिपाठी 'निराला' जन्मदिन ('मिट्टी से कर्तूंगाधन्यवाद' संग्रह से):एकांत श्रीवास्तव	अंक 15 18 कालखंड
इकाई 3. (क) शब्द-शुद्धि, वाक्य-शुद्धि, शब्द-ज्ञान- पर्यायवाची शब्द, विलोम शब्द, अनेकार्थी-शब्द, समश्रुत शब्द, अनेक शब्दों के लिए एक शब्द (ख) भोलाराम का जीव : हरिशंकर परसाई जीप पर सवार इल्लियां: शरद जोशी	अंक 15 18 कालखंड
इकाई 4.(क) मानक भाषा का अर्थ, मानक हिंदी भाषाका अर्थ, स्वरूप,	अंक 15

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विशेषताएँ, मानक, उपमानक, अमानक-भाषा (ख)शिकागो से स्वामी विवेकानंद का पत्र सत्य और अहिंसा : महात्मा गांधी	18 कालखंड
इकाई 5. (क) देवनागरी लिपि- नामकरण, स्वरूप, विशेषताएँ, कंप्यूटर का सामान्य परिचय, कंप्यूटर में हिंदी का अनुप्रयोग। (ख)कछुआ-धरम : चन्द्रधर शर्मा गुलेरी छत्तीसगढ़ का वैभव: हीरालाल शुक्ल	अंक 15 18 कालखंड

मूल्यांकन योजना:-

प्रत्येक इकाई से एक-एक प्रश्न पूछे जाएंगे। एक प्रश्न के 15 अंक होंगे। प्रत्येक प्रश्न में आंतरिक विकल्प होगा। प्रत्येक प्रश्न के दो भाग 'क' और 'ख' होंगे एवं अंक क्रमशः 08 एवं 07 होंगे। प्रश्नपत्र का पूर्णांक 75 निर्धारित है।

प्रश्नपत्रकेपूर्णांककादसप्रतिशतअंकआंतरिकमूल्यांकनकेलिएनिर्धारितहै।

पाठ्यक्रम अधिगम परिणाम:-

इस पाठ्यक्रम को पूर्ण करने के पश्चात विद्यार्थी:-

- 1.हिंदी प्रयोजनात्मक तथा कार्यशील भाषा के प्रति सजग होंगे।
- 2.भाषा संबंधी संभावित अशुद्धियाँ एवं उनके परिष्कारसे परिचित होंगे तथा मानक भाषा का व्यवहार करने में सक्षम होंगे।
- 3.विद्यार्थियों के शब्द भंडार में वृद्धि होगी।
- 4.हिंदी साहित्य के पठन-पाठन के प्रति रुचि जागृत होगी एवं सामाजिक महत्व के विविध आयामों को समझने की दृष्टि विकसित होगी।

पाठ्यक्रम निर्माण का औचित्य:-

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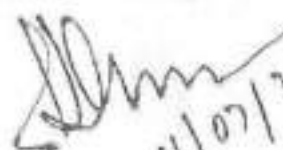
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BA/B.Sc./B.Com/B.Sc. Home.Sc. (Part-I)
Foundation Course Paper-II English Language

Max. Marks:75
 Total credits: 05

Qualifying Marks:26

Paper-II	Mark's	Period's	Credit
Unit-I Flamingo : A Textbook for college students Publication : Macmillan Publishers	3x5=15	18	01
Unit -II <ul style="list-style-type: none"> • Writing Skill • Describing a place or a person. • Writing a Biographical Sketch • Narrating an event or experience 	1x10=10	18	01
Unit -III Reading Comprehension <ul style="list-style-type: none"> • (a) Unseen Passage (Normal) • (b) Vocabulary (Text-based) 	1x5=05 1x10=10	18	01
Unit -IV Letter Writing (a) Formal Letters (Business Letters/ Application/Press/ Official Letters) (b) Informal Letters (Relatives and friends)	1x5=5 1x5=5	09	0.5
Unit-V Grammar <ul style="list-style-type: none"> • Articles • Gerunds /Participles • Subject Verb Agreement • Use of Conjunctions • Tenses • Relatives • Possessives & self forms • Grammatical items given in Textbook 'Flamingo' 	1x25=25	27	1.5
Total	75	90	05
Recommended Books- 1. Essential English Grammar, 2nd Edition by Raymond Murphy, Cambridge Publication 2. English Grammar in use 5th edition by Raymond Murphy, Cambridge Publication. 3. Advanced English Grammar by Martine Hewings Cambridge University Press.			


 11/07/2023
 (P. C. Choudhury)

CENTRAL BOARD OF STUDIES-COMMERCE-PROPOSED SYLLABUS

Class Name	B.Com. Part- 1 (CCC-2022)
Paper Code	Paper 3 CC-2201
Title of Subject	Financial Accounting
Objective	The course aims to help learners to acquire conceptual knowledge on financial accounting to impart skills for recording various kinds of business transactions with G.S.T. and to prepare financial statements
Max Marks – 75+25	Min Marks 25+10
Credit Value	5

Detailed Syllabus

Units	Content of the syllabus	No. of lectures
Unit- 1	Accounting: An introduction: Development, Definition, Needs, objectives, Branches of Accounting, Basic Accounting principles concept and conventions Accounting standard: National & International Accounting Transaction: Concept of Single and Double entry system, Books of original Records, journal, ledger, sub division of journal cash book (including GST Transaction) and Trial balance	15
Unit- 2	Final Accounts: Manufacturing Accounts, Trading Accounts, Profit Loss Account, Balance Sheet, Adjustment Entries with various provision and reserves. Rectifications of Errors: Classification of errors, location of errors, Rectification of errors, Suspense account, Effect on profit Depreciation accounting; methods of recording depreciation, methods for providing depreciation, Depreciation of different assets; Indian accounting standard and Income Tax,	15
Unit- 3	Computerized Accounting System (using any popular accounting software); Creation of Vouchers; recording transactions; preparing reports, cash book, bank book, ledger accounts, trial balance, Profit and loss account, Balance Sheet, Fund Flow statement, Cash Flow Statement, Selecting and shutting a Company, Backup and Restore data of a Company,	15

Unit- 4	Accounting for Hire-Purchase Transaction, Journal entries and ledger account in the books of Hire Venders and Hire purchase for large value items including Default and repossession. Consignment: Features, Accounting treatment in the books of the consignor and consignee. Accounting for Inland Branches: Concept of dependent and Independent branches, accounting aspects, debtor's system, stock and debtor's system, branch final accounts system and wholesale basis system. Preparation of consolidated profit and loss accounts and balance sheet with adjustment	15
Unit- 5	Joint Venture: Features, Accounting procedures, Joint Bank account, Records Maintained by Co-venturer of(a) all transactions (b) only his own transactions. (memorandum joint venture account). Partnership Account: Dissolution of a partnership firm, Amalgamation of partnership Firms, Conversion of partnership firm into limited liability Company	15
Case study/Skill based activities/field work/project work etc. (for extra credit)		
Learning out come	<ol style="list-style-type: none"> 1. Apply the generally accepted accounting principle while recording transactions with G.S.T.and preparing financial statement. 2. Demonstrate accounting process under computerized accounting system. 3. prepare cash book and other account necessary while running a business. 4. Evaluate the importance of depreciation 5. prepare dissolution and Amalgamation account of partnership firm: 	

Suggested Readings:

01. Gupta, R.L. and Radhaswamy. M; Financial Accounting Sultan Chand and Sons , New Delhi.
02. Monga J.R. Ahuja Girish and Sehgal Ashok: Financial Accounting ; Mayur Paper Back, Noida.
03. Shukla M.C. Grewal T.s. and Gupta , S.C. : Advanced Accounts; S. Chand & Co. New Delhi.
04. Singh B.K. Financial Accounting ; Wisdom Publishing House, Varanasi.
05. Shukla S.M.; Financial Accounting ; Sahitya Bhawan Publication ; Agra.
06. Karim & Khanuja; Financial Accounting; SBPDPublishing House; Agra.
07. Agrawal & Mangal; Financial Accounting Universal Publication.

Name And Signature of members

Chairman	HOD PGT Department	HOD UG Department	Subject Expert
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
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CENTRAL BOARD OF STUDIES-COMMERCE-PROPOSED SYLLABUS

Class Name:	B.Com. Part I (CCC-2022)
Paper Code/Paper No.	Paper – 4 (CC- 2202)
Title of Subject:	Business Communication
Objectives:	The course Aims to impart the learner's skill in reading writing comprehension and communication in business field especially using electronic media.
Max Marks – 75+25	Min Marks 25+10
Credit Value	5

Detail Syllabus

Units	Content of the Syllabus	No. of Lectures
Unit 1	Introducing Business Communication: — Definition, Concept and Significance of communication, Basic forms of communications; communication Models and Process: Principal of Effective communication; Theories of communication; Self-Development and Communication Development of Positive personal attitude. SWOT analysis. Communication: Ethics. Business Language.	15
Unit 2	Corporate communication: Formal and Informal communication Network; Grapevine; Miscommunication (Barriers) and improving communication, Practices in Business communication - Group Discussions, Seminar, effective listening, - Principle of effective listening, Factor of effective - listening exercises, Oral. Written and Video session, Audience analysis and feedback.	15
Unit 3	Writing skill - Business letters — Definition, Concepts, Structure, Advantage, Disadvantage, need and kinds of business letter. Essentials of Effective Business letter, Good news and bad New letters, Office memorandum Writing Resume and letter of Job Application.	15
Unit 4	Report Writing: Introduction to a Proposal, Short report and formal report, report preparation. Oral Presentation Principles of Oral Presentation, Factor effecting Presentation, Sales Presentation, Training Presentation, conducting surveys, Speeches to Motivate, Presentation skill.	15
Unit 5	Non- V e r b a l Aspects of communicating, Body Language: K kinesics, Proxemics, Para Language. Interview skills: Appearing in Interviews; Conducting Interview; mock Interview. Modern for ins of Communicating: Fax; E-Mail; video Conferencing; etc. international Communication for globe business.	15

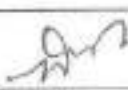
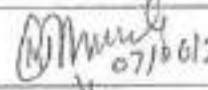

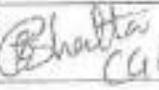
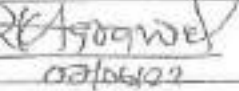

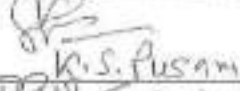
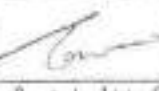
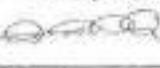

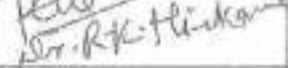


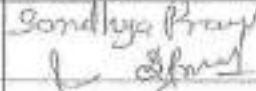
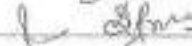



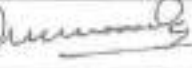
Case study/Skill based activities/field work/project work as applicable (for extra credit)

Learning Out comes	1-	Know Various forms of Communication, Communication Barriers.
	2-	Comprehend a variety of Business Correspondence and respond Appropriately.
	3-	Use appropriate Grammatical Constructions and Vocabulary to Communicate Effectively.

Suggested Reading (Books) :-

1. Balasubramanian: Business Communication: Vikas Publication House, Delhi.
2. Kaul: Effective Business Communication: Prentice Hall, New Delhi,
3. Patri VR Essentials of Communication: Greenspan Publication, New Delhi.
4. Sengupta J: Business Communication: The Real World and your career, New Delhi.
5. Dr. Mishra, Shukla and Patel: Business Communication: SBPD Publishing House, Agra.

Name and Signature of Member

Chairman	HOD PG Department	HOD UG Department	Subject Expert
1 	1  07/10/22	1  Asha	1  (Bhatta CGA Bhatta)
2 	2 	2  K.S. PUSAM	2 
3 	3 	3  Dr. R.K. Hinkane	3 A.H. KUAN 
4 	4  Sandhya Pray 	4	4 
5	5 	5	5 
6 			

CENTRAL BOARD OF STUDIES-COMMERCE-PROPOSED SYLLABUS

Class Name:	B.COM Part-I (CCC-2022)
Paper Code/Paper No:	Paper-5 (CC-2203)
Title of Subject:	Business Mathematics
Objectives:	To enable the students to have such minimum knowledge of mathematics as is applicable to business and economic situations.
Max marks: 75 + 25	Min. Marks: 25+10
Credit Value	5

Detail Syllabus

Unit	Content of Syllabus	No. of Lectures
Unit-1	<p>Average: Meaning, characteristics, uses, merits & demerits and limitations Simple and combined average, change in term value, speed average, weighted average, algebraic problems! Calculation of average in case of large number of terms. Ratio- Meaning and characteristics, comparison of ratios, division of ratios, calculation of real numbers on basis of ratios, adding or subtracting the same number in terms of ratio, practical use of ratio in business and consolidation. Proportion- Meaning, Characteristics, Difference in ratio and proportion, Problems related to Continuous Proportion, Indices Proportion, Mix ratio. Percentage- Meaning and utility, rules related to percentage, number, election, examination, income expenditure, consumption, mixture, problems related to population.</p>	15
Unit-2	<p>Commission and Brokerage- Meaning, types of business agency, cash and redemption transactions, commission before and after bonus benefits, problems related to the word prior/ due amount. Discount- Meaning and types, problems related to trading discount, cash discount, sequential discount and equivalent discount rate. Profit and Loss- Cost or purchase price, selling price, profit, loss, gross profit, concept of gross profit, percentage profit loss, purchase and sale price, more than one buyer and seller, dishonesty, adulteration, discount, commission related problems.</p>	15
Unit-3	<p>Matrices- Meaning and definitions, types of matrix, Algebra of matrix, transposed matrix Determinants- Meaning and definitions, minor, co-factor, calculation of values of determinants up to third order, Laplace's method, Sarru's method Preparation of Invoice- Meaning, Contents, Advantages and types of Invoice, Methods of preparing Invoice.</p>	15
Unit-4	<p>Logarithms and Antilogarithms- Meaning, properties, fundamental laws and types, practical use of logarithm and antilogarithm table Simple and Compound Interest- Principal, amount, concept of real and nominal rate of interest, difference between simple interest and compound interest, practical problems related to interest, time, rate, principal and amount. Calculation of interest by third, tenth and tenth rule and common multiplier method.</p>	15

Unit-5	<p>Vedic mathematics -Brief history of Vedic mathematics in Indian knowledge tradition, methods and practice of quick calculation of addition, multiplication, division, square and square root of numbers through Vedic mathematics, method of quick verification of answers from Digit Sum.</p> <p>Simultaneous equations-Meaning, characteristics, methods of solving equations in two variables- Graphical, Substitution, Elimination and Cross multiplication.</p>	15
Keywords/Tags: Vedic mathematics, Logarithms, Simultaneous Equations, Ratio, Proportion, Discount, Brokerage, Commission, Average, interest		
Case study/Skill based activities/field work/project work etc. (for extra credit)		
Learning Out comes	<p>1.To apply basic terms of integration in solving practical problems field of as of business. To explain basic methods of business calculus, types and methods of interest account and their basic applications in practice.</p> <p>2.To solve problems in the areas of business calculus, simple and compound interest account, use of compound interest account, loan and consumer credit.</p> <p>3.To discuss effects of various types and methods of interest account.</p> <p>4. Connect acquired knowledge and skills with practical problems in economic practice.</p>	

Suggested Books

1. Dr. Karim & Agrawal, Business Mathematics SBPD Publishing house, Agra(Both Hindi & English medium)
2. Magar Dr. Abhilasha Business Mathematics Himalaya publication Mumbai
3. Sancheti & Kapoor Business Mathematics Sultan chand and sons New Delhi
4. Sharma J.K. Business Mathematics IK International pvt. Ltd. New Delhi
5. Kumar Mrityunjay Business Mathematics S. Chand Publishing New Delhi
6. Agrawal Dr. Mahesh Business Mathematics Ramprasad and sons Bhopal

Name and Signature of Member

Chair man	HOD PG Department	HOD UG Department	Subject Expert
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6

CENTRAL BOARD OF STUDIES-COMMERCE-PROPOSED SYLLABUS		
Class Name	B.Com – 1 st Year (CCC-2022)	
Paper Code/Paper No.	Paper – 6 CC-2204	
Title of Subject :	Business Regulatory frame work	
Objectives:	To provide a brief idea about the framework of Indian business laws	
Max Marks – 75 + 25	Min Marks- 25 + 10	
Credit Value	5	
Detailed Syllabus		
Units	Content of the Syllabus	No. of Lectures
Unit -1	Law of contract (1872) –I : Nature of contract classification; offer and acceptance.; capacity of parties to contract, free consent, considerations, Legality of object; Agreement declared void.	15
Unit-2	Special contracts; Indemnity & Guarantee, Bailment and pledge; Law of Agency- Meaning, Modes of creating Agency, Types of Agents, Personal Liability of an Agent and Termination of Agency.	15
Unit -3	Sale of Goods Act (1930): Definition, Sale & Agreement to sell, Types of Goods, Conditions & Warranties, Sale by Non-owners, Unpaid Seller, CIF, FOB and Ex-Ship Contracts.	15
Unit - 4	Negotiable Instrument Act (1881) Definition of Negotiable instrument; Feature; promissory note; Bill of exchange cheque; Holder and holder in the due course; crossing of a cheque, types of crossing; Negotiation; dishonor and discharge of negotiable instrument, Information technology Act 2000 and cybercrime Act 2012 related to e- Business only.	15
Unit - 5	The consumer protection Act 2019: Main provision, Definition of consumer, consumer Disputes, Grievances redressal machinery; Indian partnership Act 1932, Limited Liabilities partnership Act 2008, Introduction of Intellectual property Right Act – Copyright, Patent & Trademark.	15
Case study/Skill based activities/field work/project work as applicable (for extra credit)		
Learning out comes	1	To know the students with the basic concept terms & provisions of mercantile and business laws.
	2	To develop well verse in basic provisions regarding legal framework governing the business world.
	3	Knowing the rights and liability of every citizen regarding consumer protection act.

Suggested Readings: Book

1. Kuchal M.C. Business Law: Vikas publishing house, Delhi. (English Medium)
2. Lapoor N.D.: Business Law; Sultanchand & Sons, New Delhi. (English Medium)
3. Chandha P.R.: Business Law; Galgotia New Delhi. (English Medium)
4. Dr. J.K. Vaishnav: Business Law; Sahitya Bhawan Publication Agra (English Medium)

Name and Signature of Member

	Chairman	HOD PG Department	HOD UG Department	Subject Expert
1	[Signature]	1 [Signature]	1 [Signature]	1 [Signature]
2	[Signature]	2 [Signature]	2 [Signature]	2 [Signature]
3	[Signature]	3 [Signature]	3 [Signature]	3 [Signature]
4	[Signature]	4 [Signature]	4 [Signature]	4 [Signature]
5	[Signature]	5 [Signature]	5 [Signature]	5 [Signature]
6	[Signature]	[Signature]	[Signature]	[Signature]

CENTRAL BOARD OF STUDIES-COMMERCE-PROPOSED SYLLABUS

Class Name	B. Com Part-I (CCC-2022)
Paper Code/ Paper No.	Paper – 7 (CC-2205)
Title of Subject:	Business Environment
Objectives:	1. To acquaint students with the local and global environment of business. 2. To acquaint students with the economic, political and technological environment in business 3. To acquire in - depth knowledge of govt. policies and legal environment of business.
Max Marks 75+25	Min Marks 25+10
Credit Value	5

Detailed Syllabus

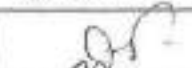
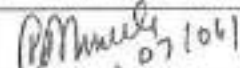
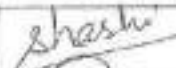
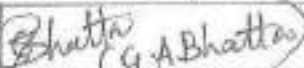
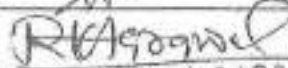
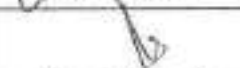
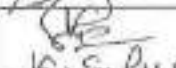
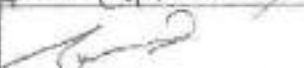


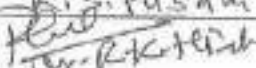
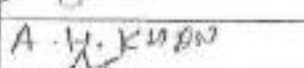
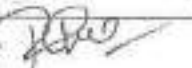
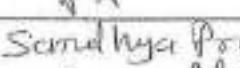
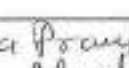
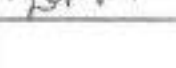


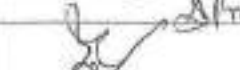
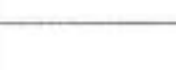

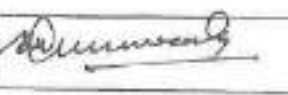
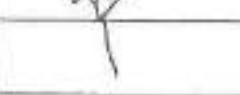


Unit	Content of Syllabus	No. of Lecturers
Unit- 1	Business Environment: Type of Environment-internal, external, micro and macro environment. Competitive structure of industry, environmental analysis and strategic management. Managing diversity. Scope of business, characteristics of business. Objectives and the uses of study. Process and limitations of environmental analysis.	15
Unit- 2	Economic Problem of Growth: Inflation Parallel Economy Industrial Sickness Economic Factors of Growth: Foreign Direct Investment (FDI), Foreign Portfolio Investment (FPI), Micro, Small and Medium Enterprises (MAMEs)	15
Unit- 3	International Environment: Trends in World Trade & The Problems of Developing Countries, Foreign Trade & Economic Growth, International Economic Groups: GATT, WTO, UNCTAD, World Bank, IMF, TRIPS, TRIMS Regional Trade Agreements: European Union (EU), ASEAN, SAARC, NAFTA	15
Unit- 4	Govt. Policies: Export-Import Policy, Monetary & Fiscal Policy, Privatization, Liberalization, Globalization, Demonetization, Disinvestment, Foreign Exchange Management Act 2000 Industrial Policy, Industrial Licensing (National & State)	15
Unit- 5	Economic Planning: Need, Objective, Strategy, Review of Previous Plan, NITI AAYOG, Gross Domestic Product : Meaning, Characteristics, calculation and impact in employment & productivity with refence to India & Chhattisgarh. Economic Environment in Chhattisgarh: Economic of Chhattisgarh – Its Basic Feature, Population of Chhattisgarh and Its Characteristics. Industry and Industrial Development in Chhattisgarh Mineral & Mineral Based Industry in Chhattisgarh. Agriculture in Chhattisgarh. Forest & Forest Produce in Chhattisgarh. Development of Power in Chhattisgarh. Development of Transport in Chhattisgarh.	15
Case study/Skill based activities/field work/project work as applicable (for extra credit)		

Learning Out comes	1. Understand relationship between environment and business Applying the environment analysis techniques in Practice. 2. The students will be able to demonstrate and develop conceptual framework of business environment and generate interest in international business. 3. Familiarize with the Nature of local business environment and its component. 4. Acquaint students with govt. policies and different roles for the emergence, upliftment and smooth functioning of business organization.
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Suggested Readings:

01. Sheikh Saleem, Business Environment, Pearson
02. Francis, Cherunilan, Business Environment, Himalaya Publishing House
03. Gupta C.B., Business Environment Sultan Chand & Sons
04. Paliwar Veena Keshav, Business Environment, PHI Learning Private Limited, Delhi
05. Singh Ranjoet ,Business Environment, Kalyani Publishers New Delhi
06. Sinha V.C., Business Environment (Hindi & English), SBPD Publications Agra
07. Upadhyay Sharma Dayal, Business Environment (Hindi), Ramesh Book Depot Jaipur
08. Singh, Dr. S.K., Business Environment (Hindi), Sahitya Bhawan Publication Agra
09. Jain Dr. S.C., Business Environment (Hindi), Kailash Pastak Sadan, Bhopal
10. Joshi Rosy, Kapoor Sangam, Business Environment (Hindi), Kalyani Publishers New Delhi

Name and Signature of Member

Chairman	HOD PG Department	HOD UG Department	Subject Expert
1 	1  07/06/22	1  Shashi	1  Bhatta (G.A. Bhatta)
2  07/06/22	2 	2  K.S. Pusan	2 
3 	3 	3  Dr. R.K. Mishra	3 A. Y. K. P. D. 
4 	4  Sandhya P. S. 	4 	4 
5 	5 	5 	5 
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CENTRAL BOARD OF STUDIES-COMMERCE-PROPOSED SYLLABUS

Class Name	B.Com.1st Year (CCC-2022)
Paper Code/ Paper No.	Paper- 8 (CC-2206)
Title of Subjects:	Business Economics
Objectives:	The course aims to acquaint the learners with fundamental economic theories and their impact on pricing, demand, supply, production, and cost concepts.
Max Marks 75 +25	Min Marks: 25 + 10
Credit Value	5

Detailed Syllabus

Units	Content of the Syllabus	No. of Lectures
Unit-1	Introduction: Micro & Macro Economics Meaning, Scope, Importance and limitations, nature, Distinguish between Micro & Macro Economics Business Economics Meaning, Definition, objective and nature & Scope, Role and Responsibilities of a business Economist. Market Demand Analysis: Meaning of Demand and Determinants of Demand, Changes in Demand, Demand Function Law of Demand, Types of Demand and Exceptions of Law of Demand	15
Unit-2	Consumer Behaviour and Elasticity of Demand: Utility Analysis of Demand, Law of Diminishing marginal utility & Consumer Surplus, Indifference Curve technique, Price Line or Budget Line, Concept of Elasticity of Demand, Importance, Types, Calculations of different concepts of Elasticity, Methods of measurement of Price Elasticity of Demand	15
Unit-3	Production Analysis: Meaning of Supply and Supply function, Concepts of Stock and Flow, Determinants of Supply, Law of Supply, Changes in Supply, Production Function: a) Law of Variable Proportions b) Law of Returns to Scale, Economies and Diseconomies of Scale	15
Unit-4	Market Morphology and Equilibrium of the Firm and Industry: Meaning, Classification and Types of Market, Market structure formed on the basis of perfect and imperfect competition, Price and output determination under Perfect Competition, Price and Output determination under monopoly, Discrimination Monopoly- Features, Price and Output determination under discriminating Monopoly, Price and Output determination under Monopolistic Competition, Oligopoly	15
Unit-5	Chhattisgarh Economy- Price Control- Price ceiling and price floor, Study of Chhattisgarh economy, Prospects of economy development, Economic Survey of Chhattisgarh	15

Case study/Skill based activities/field work/project work etc. (for extra credit)

Learning Out comes:	1	Examine how different economic systems function and evaluate implications of various economic decisions;
	2	Examine how consumers try to maximize their satisfaction by spending on different goods;
	3	Analyze the relationship between inputs used in production and the resulting outputs and costs;
	4	Analyze and interpret market mechanism and behaviour of firms and response of firms to different market situations
	5	Examine various facets of pricing under different market situations.

Suggested Readings:

1. Ahuja, H. L. (2019). Theory of Micro Economics. New Delhi: Sultan Chand Publishing House.
2. Koutsoyannis, A. (1975). Modern Microeconomics. London: Palgrave Macmillan.
3. Chaturvedi, D. D., & Gupta, S. L. (2010). Business Economics Theory & Applications. New Delhi: International Book House Pvt. Ltd.
4. Kennedy, M. J. (2010). Micro Economics. Mumbai: Himalaya Publishing House.

Websites:

1. Relevant study material of ICAI: www.icaai.org.
2. <https://www.icsi.edu/media/website/Business%20Economic>
3. <https://www.businesseconomics.com/>

Name and Signature of Member

Chairman	HOD PG Department	HOD UG Department	Subject Expert
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6			



हेमचंद यादव विश्वविद्यालय, दुर्ग (छ.ग.)

(पूर्व नाम- दुर्ग विश्वविद्यालय, दुर्ग)

रायपुर नाका दुर्ग (छ.ग.)-491001

ई मेल : academic@durguniversity.ac.in

वेब साइट : www.durguniversity.ac.in

दूरभाष : 0788-2359400

क्र. 1458 /अका./2019

दुर्ग, दिनांक 05/07/2019

प्रति,

प्राचार्य,
सनस्त संबद्ध महाविद्यालय,
हेमचंद यादव विश्वविद्यालय,
दुर्ग (छ.ग.)

विषय:- स्नातक स्तर के पाठ्यक्रम विषयक।

संदर्भ:- संयुक्त संचालक, उच्च शिक्षा विभाग के पत्र क्र. 2456/315/आउशि/सम/2019, दिनांक 16.05.2019।

—00—

विषयांतर्गत लेख है कि संदर्भित पत्र के माध्यम से प्राप्त स्नातक स्तर के निम्नलिखित कक्षा/विषय के परिवर्तित/संशोधित पाठ्यक्रम शिक्षा सत्र 2019-20 से स्नातक के तीनों वर्ष के लिए लागू किया जाता है।

1. बी.कॉम. - आधार पाठ्यक्रम-हिन्दी भाषा एवं वाणिज्य।

अतः आपसे अनुरोध है कि पाठ्यक्रम परिवर्तन/संशोधन से महाविद्यालय के शिक्षकों एवं छात्र-छात्राओं को अवगत कराने का कष्ट करेंगे।

टीप :- परिवर्तित/संशोधित पाठ्यक्रम विश्वविद्यालय की वेबसाईट पर उपलब्ध है।

संलग्न : उपरोक्तानुसार


कुलसचिव

क्र. 1459 /अका./2019

दुर्ग, दिनांक 05/07/2019

प्रतिलिपि:-

1. संयुक्त संचालक, उच्च शिक्षा विभाग के पत्र क्र. 2456/315/आउशि/सम/2019, दिनांक 16.05.2019 के परिपेक्ष्य में सूचनार्थ।
2. कुलपति के निज सहायक एवं कुलसचिव के निज सहायक, हेमचंद यादव विश्वविद्यालय, दुर्ग।
3. उपकुलसचिव, परीक्षा विभाग एवं उपकुलसचिव, गोपनीय विभाग हेमचंद यादव विश्वविद्यालय, दुर्ग।


सहा. कुलसचिव (अका.)

B. Com. - II

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1. Revised Ordinance No.-23
2. Scheme of Examination
3. Hindi Language
4. English Language
5. G-I
 1. Corporate Accounting
 2. Company Law
6. G-II
 1. Cost Accounting
 2. Principle of Business Management
7. G-III
 1. Business Statistics
 2. Fundamental of Entrepreneurship
8. Computer Application

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REVISED ORDINANCE NO.-23

(As per State U.G.C. Scheme)

BACHELOR OF COMMERCE

1. The three year course has been broken up into three Parts.
Part-I known as B. Com. Part-I Examination at the end of first year. Part-II Examination at the end of the second year, and,
Part-III Examination at the end of the third year.
2. A candidate who after passing (10+2) Higher Secondary or Intermediate examination of Chhattisgarh Board of Secondary Education, Raipur or any other examination recognized by the University or Chhattisgarh Board of Secondary Education as equivalent there to has attended a regular course of study in an affiliated college or in the Teaching Department of the University for one academic year, shall be eligible for appearing at the B.Com. Part-I examination.
3. A candidate who after passing B.Com. Part-I examination of the University or any other examination recognized by the University as equivalent thereto has attended a regular course of study for one academic year in an affiliated College or in the Teaching Department of the University, shall be eligible for appearing at the B.Com. Part-II Examination.
4. A candidate who after passing B.Com. Part-II examination of the University has completed a regular course of study for one academic year in an affiliated College or in the Teaching Department of the University, shall be eligible for appearing at the B.Com. Part-III examination.
5. Besides regular students, subject to their compliance with this ordinance, ex-students and non-collegiate students shall be eligible for admission to the examination as per provision of Ordinance No. 6 relating to examinations (General).
6. Provided that non-collegiate candidates shall be permitted to offer only such subject/ papers as are taught to the regular students at any of the University Teaching Department or College.
7. Every candidate for B.Com. Examination shall be examined in subjects as mentioned in the marking scheme and course or studies.
8. A candidate who has passed the B.Com. Part-III examination of the University shall be

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allowed to present him of examination in any of the additional subjects prescribed for the B.Com. Examination and not taken by him at the degree examination. Such candidate will have to first appear and pass the B. Com. Part-I examination in the subject which he proposes to offer then the B.Com. Part-II and Part-III examination in the same subject. Successful candidates will be given a certificate to that effect.

9. In order to pass at any part of the three year degree course examination, an examinee must obtain not less than 33% of the total marks in each paper/group of subjects. In group where both theory and practical examinations are provided an examinee must pass in both theory and practical parts of examination separately.
10. Candidate will have to pass separately at the Part-I, Part-II and Part-III examination. No division shall be assigned on the result of the Part-I and Part-II examinations In determining the division of the Final examination, total marks obtained by the examinees in their Part-I, Part-II and Part-III examination in the aggregate shall be taken into account. Candidate will not be allowed to change subjects after passing Part-I examination.
11. Provided in case of candidate who has passed the examination through the supplementary examination having failed in one subject/group only, the total aggregate mark being carried over for determining the division, shall include actual marks obtained in the subject/group in which he appeared at the supplementary examination.
12. Successful examinees at the Part - III examination obtaining 60% or more marks shall be placed in the First Division, those obtaining less than 60% but not less than 45% marks in the Second Division and other successful examinees in the Third Division.



Hemchand Yadav Vishwavidyalaya, Durg (C.G.)
SYLLABUS
B.COM. PART-II
GROUPING OF SUBJECTS AND SCHEME OF EXAMINATION

Subject		Max.	Min.
A. Foundation Course			
I. Hindi Language		75	26
II. English Language		75	26
B. Three Compulsory Groups			
Group-I			
I. Corporate Accounting	75	150	50
II. Company Law	75		
Group-II			
I. Cost Accounting	75	150	50
II. Principles of Bus. Management	75		
Group-III			
I. Business Statistics	75	150	50
II. Fundamental of Entrepreneurship	75		

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संशोधित पाठ्यक्रम
बी.ए./बी.एस-सी./बी.कॉम./बी.एच.एस.-सी.
भाग - दो, आधार पाठ्यक्रम
प्रश्न पत्र - प्रथम (हिन्दी भाषा) (पेपर कोड - 0171)

पूर्णांक- 75

खण्ड - क	निम्नलिखित 5 लेखकों के पाठ शामिल होंगे -	अंक-35
1. महात्मा गांधी	- चोरी और प्रायश्चित	
2. आचार्य नरेंद्र देव	- युवकों का समाज में स्थान	
3. वासुदेव शरण अग्रवाल	- मातृभूमि	
4. हरि ठाकुर	- डॉ. खूबचंद बघेल	
5. पं. माधवराव सप्रे	- सम्भाषण-कुशलता	

खण्ड-ख	हिन्दी भाषा और उसके विविध रूप	अंक-16
1. कार्यालयीन भाषा		
2. मीडिया की भाषा		
3. वित्त एवं वाणिज्य की भाषा		
4. मशीनी भाषा		

खण्ड-ग	हिन्दी की व्याकरणिक कोटियाँ	अंक-24
	संज्ञा, सर्वनाम, विशेषण, क्रिया विशेषण,	
	समास, संधि एवं संक्षिप्तियाँ	
	अनुवाद व्यवहार : अंग्रेजी से हिन्दी में अनुवाद	

इकाई विभाजन-

इकाई- 1	चोरी और प्रायश्चित : महात्मा गांधी / कार्यालयीन भाषा, मीडिया की भाषा
इकाई- 2	युवकों का समाज में स्थान : आचार्य नरेंद्र देव / वित्त एवं वाणिज्य की भाषा, मशीनी भाषा
इकाई- 3	मातृभूमि: वासुदेवशरण अग्रवाल / संज्ञा सर्वनाम, विशेषण, क्रिया विशेषण
इकाई- 4	डॉ. खूबचंद बघेल : हरि ठाकुर/समास, संधि,
इकाई- 5	सम्भाषण-कुशलता : पं. माधवराव सप्रे, / अनुवाद - अंग्रेजी से हिन्दी में अनुवाद, संक्षिप्तियाँ

मूल्यांकन योजना -

प्रत्येक इकाई से एक-एक प्रश्न पूछे जाएंगे। प्रत्येक प्रश्न में आंतरिक विकल्प होगा। प्रत्येक प्रश्न के 15 अंक होंगे। प्रत्येक इकाई को दो-दो खण्डों (क्रमशः 'क' और 'ख' में) विभक्त करते हुए निर्धारित पाठ से 8 एवं शेष पाठ्य सामग्री से 7 अंक के प्रश्न होंगे। इस प्रकार पूरे प्रश्न-पत्र के पूर्णांक 75 होंगे।

पाठ्यक्रम संशोधन का औचित्य : विद्यार्थी चर्चित एवं सुप्रसिद्ध व्यक्तियों के लेख के माध्यम से समाज एवं राष्ट्रहित के साथ-साथ व्यक्तित्व विकास विषयक मुद्दों से परिचित हो सकें तथा व्याकरणक एवं भाषा विषयक प्रस्तावित पाठ्यक्रम के माध्यम से हिन्दी भाषा संबंधित प्रयोग पक्ष से परिचित होते हुए प्रतियोगी परीक्षाओं की दृष्टि से ज्ञानार्जन कर सकें।

ENGLISH LANGUAGE (Paper Code-1132)

B.A. / B.Sc. /B.COM. /B.H. Sc. - II

M.M.75

The question paper for B.A. /B.Sc./B.Com./B.H.Sc., English Language and cultural values shall comprise the following units:

UNIT-I	Short answer questions to be passed by (Five short answer questions of three marks each)	15 Marks
UNIT-II	(a) Reading comprehension of an unseen passage (b) Vocabulary	05 Marks
UNIT-III	Report-Writing	10 Marks
UNIT-IV	Expansion of an idea	10 Marks
UNIT-V	Grammar and Vocabulary based on the prescribed text book.	20+15Marks

Note: Question on all the units shall asked from the prescribed text which will Comprise Specimens of popular creative/writing and the following it any

- a Matter & technology
 - i. State of matter and its structure
 - ii. Technology (Electronics Communication, Space Science)
- b Our Scientists & Institutions
 - I. Life & work of our eminent scientist Arya Bhatt. Kaurd Charak Shusruta, Nagarjuna, J.C. Bose and C.V. Raman, S. Rmanujam, Homi J. Babha Birbal Sahani.
 - II. Indian Scientific Institutions (Ancient & Modern)

Books Prescribed:

Foundation English for U.G. Second Year - Published by M.P. Hindi Granth Academy, Bhopal.



B.Com. II year
C O M P U L S O R Y
Group - I PAPER - I (CORPORATE ACCOUNTING)
(As per company act 2013)
Proposed Syllabus

OBJECTIVE

This course enable the students to develop awareness about corporate accounting in conformity with the provisions of companies Act.

UNIT-I Issue, Forfeiture, and Re-issue of Shares : Redemption of preference shares; Issue and redemption of debentures.

UNIT-II Final Accounts (as per company act 2013)
Liquidation of Company .

UNIT-III Valuation of Goodwill and Shares.

UNIT-IV Accounting for Amalgamation of Companies as per Indian Accounting Standard 14; Accounting for internal reconstruction - excluding intercompany holdings and re-construction schemes.

UNIT-V Consolidated Balance Sheet of holding companies with one subsidiary only.

SUGGESTED READINGS :

1. Dr. S.M. Shukla, Sahitya Bhawan Agra.
2. Dr. Mangal Mehta & Agrawal Published - Indore.
3. Dr. Karim Khanuja - Published - Agra.
4. Gupta R.L., Radhaswamy M; Company Accounts; Sultan Chand & Sons, New Delhi.

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Group - I - PAPER – II

COMPANY LAW

Proposed Syllabus

OBJECTIVE

This objective of this course is to provide basic knowledge of the provisions Companies Act, 2013, along with relevant case law.

UNIT-I Corporate personalities; Kinds of Companies, Nature & Scope, promotion on and incorporation of companies.


UNIT-II Memorandum of Association; Articles of Association; Prospectus, Shares; share capital - transfer and transmission.

UNIT-III Capital management - borrowing powers, mortgages and charges, debentures.
Directors - Managing Director, whole time director, Appointment, Remuneration, and duties.

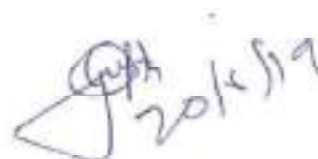
UNIT-IV Company meetings - kinds, Notice, quorum, voting, proxy, resolutions, minutes.

UNIT-V Majority powers and minority rights; Prevention of oppression and mismanagement. Winding up - kinds and conduct.


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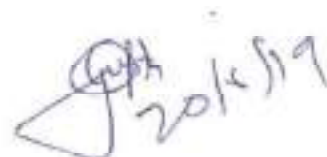
SUGGESTED READINGS :

1. Singh Avtar : Company Law; Eastern Book Co., Lucknow.
2. Dr. S.M. Shukla, Shahitya Bhawan Agra.
3. Dr. R.C. Agrawal, Shahitya Bhawan Agra.
4. Kapoor N.D. : Company Law - Incorporating the Provisions of the Companies Amendment Act, 2013 Chand & Sons, New Delhi


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Group - II PAPER – I

(COST ACCOUNT)

Proposed Syllabus

OBJECTIVE

This course exposes the students to the basic concepts and the tools used in cost accounting.


- UNIT-I** Introduction : Nature and scope of cost accounting ; Cost concepts and classification; Methods and techniques; Installation of costing system; Concept of cost audit. Accounting for Material : Material Control; Concept and techniques; Pricing of material issues; Treatment of material losses.
- UNIT-II** Accounting for Labour : Labour cost control procedure; Labour turnover; Idle time and overtime; Methods of wage payment - time and piece rates; Incentive schemes. Accounting for overheads; Classification and departmentalization; Absorption of overheads; Determination of overhead rates; Under and over absorption, and its treatment.
- UNIT-III** Cost Ascertainment : Unit costing; Job, batch and contract costing.
- UNIT-IV** Operating costing; Process Costing - excluding inter - process profits, and joint and by - products.
- UNIT-V** Cost Records : Intergal and non - integral system; Reconciliation of cost and financial accounts; Break Even Point.

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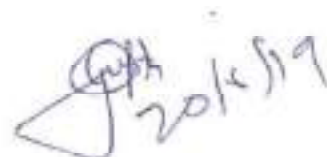
SUGGESTED READINGS :

1. M.L. Agrawal : Sahitya Bhawan Agra.
2. Maheshwari S.N. : Advanced Problems and Solutions in Cost Accounting; Sultan Chand, New Delhi.
3. Arora M.N. : Cost Accounting - Principles and Practice; Vikas, New Delhi.
4. Jain S.P. and Narang K.L. : Cost Accounting; Kalyani New Delhi.


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Group - II - PAPER - II

PRINCIPLES OF BUSINESS MANAGEMENT

Proposed Syllabus

OBJECTIVE

This Course familiarizes the students with the basics basics of principles of management.

- UNIT-I** Introduction : Concept, nature, process, and significance of management; management roles (Mintzberg); An overview of functional areas of management; Development management thought; Classical and neo-classical systems; Concept approaches.
- UNIT-II** Planning : Concept, process and types.
Decision making - concept and Bounded rationality; Management by objectives; Corporate planning; Environment analysis and diagnosis; Strategy formulation.
- UNIT-III** Organizing : Concept, nature, process and significance; Authority and resident relationships; Centralization and decentralization; Departmentation; Organization structure - forms and contingency factors.
- UNIT-IV** Motivating and Leading People at work : Motivation - concept; Theories Herzberg, McGregor, and Ouchi; Financial and non- financial incentives.
Leadership - concept and leadership styles; Leadership theories (Tannenb Schmidt.); Likert's System Management;
Communication - nature, process, networks, and barriers, Effective Communication.
- UNIT-V** Managerial Control : Concept and process; Effective control system; Technical control - traditional and modern. Management of Change : Concept, nature, and process of planned Resistance to change; Emerging horizons of management in a environment.

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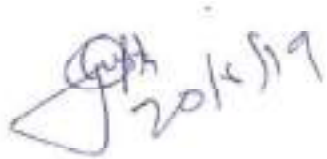
SUGGESTED READINGS :

1. Dr. R.C. Agrawal, Agra.
2. Dr. S.C. Saxena, Agra.
3. Wehrich and Koontz, et al : Essentials of Management; Tata McGraw Hill, New Delhi.


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Group - III - PAPER - I
BUSINESS STATISTICS

Proposed Syllabus

OBJECTIVE

It enable the students to gain understanding of statistical techniques as are applicable to business.

UNIT-I Introduction : Statistics as a subject; Descriptive Statistics - compared to Inferential Statistics; Types of data; Summation operation; Rules of Sigma E operations, Analysis of University Data; Construction of a frequency distribution; Concept of central tendency.

UNIT-II Dispersion - and their measures; Partition values; Skewness and measures;

UNIT-III Analysis of Bivariate Data : Linear regression two variables and correlation.

UNIT-IV Index Number; Meaning, types, and uses; Methods of Constructing price and quantity indices (simple and aggregate); Tests of adequacy; Chain - base index numbers; Base shifting, splicing and deflating; Problems in constructing index numbers; Consumer price index. Analysis of Time Series : Cause of Variation in time series data; Components of a time series; Decomposition - Additive and Multiplicative models; Determination of trend - Moving Averages Method and method of least squares (including linear, second degree, parabolic, and exponential trend); Computation of seasonal indices by simple averages, ratio - to - trend, ratio - to - moving average, and link relative methods.

UNIT-V Forecasting and Methods : Forecasting - concept, types and importance; General approach to forecasting; Methods of forecasting; demand; Industry Vs Company sales forecast; Factors affecting company sales. Theory of Probability : as a concept; The three approaches to defining probability; Addition and multiplication laws of probability; Conditional Probability; Bayes' Theorem; Expectation and Variance of a random variable.

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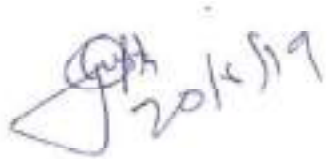
SUGGESTED READINGS :

1. S.M.Shukla, Shahitya Bhawan,Agara.
2. Statistical Analysis, Dr. Rajesh Shukla and J.B. Agrawal


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Group - III PAPER – II
FUNDAMENTALS OF ENTREPRENEURSHIP

Proposed Syllabus

OBJECTIVE

It Provides exposure to the students to the entrepreneurial culture and industrial growth so as to preparing them to set up and manage their own small units.

UNIT-I Introduction : The entrepreneur; Definition; Emergence of entrepreneurial class; Theories of entrepreneurship; Role of socio - economic environment; Characteristics.

UNIT-II Promotion of a Venture; Opportunities analysis; External environmental analysis economic, social and technological; Competitive factors; Legal requirements for establishment of a new unit, and raising of funds; Venture capital sources and documentation required.

UNIT-III Entrepreneurial Behavior : Innovation and entrepreneur; Entrepreneurial behavior and Psycho - Theories, Social responsibility.

UNIT-IV Entrepreneurial Development Programs (EDP) : EDP, their role, relevance, and achievements; Role of Government in organizing EDPs; Critical evaluation.


UNIT-V Role of Entrepreneur : Role of an entrepreneur in economic growth as an innovator, generation of employment opportunities, complementing and supplementing economic growth, bringing about social stability and balanced regional development of industries; Role in export promotion and import substitution, forex earnings, and augmenting and meeting local demand.

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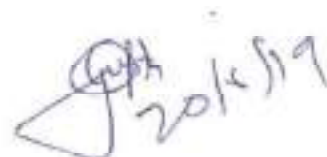
SUGGESTED READINGS :

1. Srivastava S.B. : A Practical Guide to industrial Entrepreneurs; Sultan Chand and Sons, New Delhi.
2. Tandon B.C. : Environment and Entrepreneur; Chugh Publications, Allahabad.
3. Prasanna Chandra : Project Preparation, Appraisal, Implementation; Tata McGraw Hill, New Delhi.


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हेमचंद यादव विश्वविद्यालय, दुर्ग (छ.ग.)

(पूर्व नाम- दुर्ग विश्वविद्यालय, दुर्ग)

रायपुर नाका दुर्ग (छ.ग.)-491001

ई मेल : academic@durguniversity.ac.in

वेब साइट : www.durguniversity.ac.in

दूरभाष : 0788-2359400

क्र. 3861 / अका. / 2021

दुर्ग, दिनांक 30/7/21

प्रति,

प्राचार्य,

समस्त संबद्ध महाविद्यालय,

हेमचंद यादव विश्वविद्यालय,

दुर्ग (छ.ग.)

विषय:- स्नातक स्तर भाग-तीन के पाठ्यक्रम विषयक।

संदर्भ:- संयुक्त संचालक, उच्च शिक्षा विभाग के पत्र क्र. 2456/315/आजशि/सम/2019, दिनांक 16.05. 2019।

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विषयांतर्गत लेख है कि संदर्भित पत्र के माध्यम से प्राप्त स्नातक स्तर भाग-तीन के निम्नलिखित कक्षा/विषयों के परिवर्तित/संशोधित पाठ्यक्रम शिक्षा सत्र 2021-22 से लागू किये जाते हैं:-

1. बी.ए. - आधार पाठ्यक्रम - हिन्दी भाषा, हिन्दी साहित्य, राजनीतिशास्त्र, अर्थशास्त्र, नृत्य, दर्शनशास्त्र, समाजशास्त्र, इतिहास, मानवविज्ञान, संस्कृत, सांख्यिकी प्राचीन भारतीय इतिहास, भूगोल, मनोविज्ञान
2. बी.एस-सी. - आधार पाठ्यक्रम-हिन्दी भाषा, जीव विज्ञान, मानवविज्ञान, बायोटेक्नोलॉजी, कम्प्यूटर साईंस, गणित, भौतिक शास्त्र, प्राणीशास्त्र, सूक्ष्मजीव विज्ञान, वनस्पतिशास्त्र, भूविज्ञान, इलेक्ट्रॉनिक्स, रसायन शास्त्र, सांख्यिकी, भूगोल।
3. बी.ए./बी.एस.सी - आधार पाठ्यक्रम - हिन्दी भाषा एवं गृह विज्ञान।
(गृह विज्ञान)
4. बी.सी.ए. - भाग-3
5. बी.कॉम. - भाग-1, भाग-2 एवं भाग-3 का परिवर्तित पाठ्यक्रम सत्र 2019-20 में जारी कर लागू किया जा चुका है।

कृ.प.उ.

उपरोक्त विषयों को शिक्षा सत्र 2021-22 से संशोधित रूप में स्नातक स्तर भाग-तीन के लिए लागू किया जाता है स्नातक स्तर भाग-एक हेतु सत्र 2019-20 एवं स्नातक स्तर भाग-दो हेतु सत्र 2020-21 में लागू पाठ्यक्रम मान्य होंगे।

टीप:- परिवर्तित/संशोधित पाठ्यक्रम विश्वविद्यालय की वेबसाईट पर उपलब्ध है।


कुलसचिव

क्र. 3862 /अका./2021

दुर्ग, दिनांक 30/7/21

प्रतिलिपि:-

1. संयुक्त संचालक, उच्च शिक्षा विभाग के पत्र क्र. 2456/315/आउशि/सम/2019, दिनांक 16.05.2019 के परिपेक्ष्य में सूचनार्थ
2. उपकुलसचिव, परीक्षा विभाग एवं उपकुलसचिव, गोपनीय विभाग हेमचंद्र यादव विश्वविद्यालय, दुर्ग।
3. वेबसाईट प्रभारी, वेबसाईट पर पाठ्यक्रम प्रकाशित करने हेतु।
4. कुलपति के निज सहायक एवं कुलसचिव के निज सहायक, हेमचंद्र यादव विश्वविद्यालय, दुर्ग।


सहा. कुलसचिव (अका.)

HEMCHAND YADAV VISHWAVIDYALAYA, DURG (C.G.)

Website - www.durguniversity.ac.in, Email - durguniversity@gmail.com



SCHEME OF EXAMINATION & SYLLABUS Of

**B.Com. Final Year
Session 2021-22**

**(Approved by Board of Studies)
Effective from July 2021**

REVISED ORDINANCE NO.-23

(As per State U.G.C. Scheme)

BACHELOR OF COMMERCE

1. The three year course has been broken up into three Parts.
Part-I known as B. Com. Part-I Examination at the end of first year. Part-II Examination at the end of the second year, and,
Part-III Examination at the end of the third year.
2. A candidate who after passing (10+2) Higher Secondary or Intermediate examination of Chhattisgarh Board of Secondary Education, Raipur or any other examination recognized by the University or Chhattisgarh Board of Secondary Education as equivalent there to has attended a regular course of study in an affiliated college or in the Teaching Department of the University for one academic year, shall be eligible for appearing at the B.Com. Part-I examination.
3. A candidate who after passing B.Com. Part-I examination of the University or any other examination recognized by the University as equivalent thereto has attended a regular course of study for one academic year in an affiliated College or in the Teaching Department of the University, shall be eligible for appearing at the B.Com. Part-II Examination.
4. A candidate who after passing B.Com. Part-II examination of the University has completed a regular course of study for one academic year in an affiliated College or in the Teaching Department of the University, shall be eligible for appearing at the B.Com. Part-III examination.
5. Besides regular students, subject to their compliance with this ordinance, ex-students and non-collegiate students shall be eligible for admission to the examination as per provision of Ordinance No. 6 relating to examinations (General).
6. Provided that non-collegiate candidates shall be permitted to offer only such subject/ papers as are taught to the regular students at any of the University Teaching Department or College.
7. Every candidate for B.Com. Examination shall be examined in subjects as mentioned in the marking scheme and course or studies.
8. A candidate who has passed the B.Com. Part-III examination of the University shall be

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allowed to present him of examination in any of the additional subjects prescribed for the B.Com. Examination and not taken by him at the degree examination. Such candidate will have to first appear and pass the B. Com. Part-I examination in the subject which he proposes to offer then the B.Com. Part-II and Part-III examination in the same subject. Successful candidates will be given a certificate to that effect.

9. In order to pass at any part of the three year degree course examination, an examinee must obtain not less than 33% of the total marks in each paper/group of subjects. In group where both theory and practical examinations are provided an examinee must pass in both theory and practical parts of examination separately.
10. Candidate will have to pass separately at the Part-I, Part-II and Part-III examination. No division shall be assigned on the result of the Part-I and Part-II examinations In determining the division of the Final examination, total marks obtained by the examinees in their Part-I, Part-II and Part-III examination in the aggregate shall be taken into account. Candidate will not be allowed to change subjects after passing Part-I examination.
11. Provided in case of candidate who has passed the examination through the supplementary examination having failed in one subject/group only, the total aggregate mark being carried over for determining the division, shall include actual marks obtained in the subject/group in which he appeared at the supplementary examination.
12. Successful examinees at the Part - III examination obtaining 60% or more marks shall be placed in the First Division, those obtaining less than 60% but not less than 45% marks in the Second Division and other successful examinees in the Third Division.



- इकाई-एक (क) भारत माता : सुमित्रानंदन पंत
(ख) कथन की शैलियाँ
1. विवरणात्मक शैली
2. मूल्यांकन शैली
3. व्याख्यात्मक शैली
4. विचारात्मक शैली
- इकाई-दो (क) सूखी डाली : उपेन्द्रनाथ अशक
(ख) विभिन्न संरचनाएँ
1. विनम्रता सूचक संरचना
2. विधि सूचक संरचना
3. निषेध परक संरचना
4. काल-बोधक संरचना
5. स्थान-बोधक संरचना
6. दिशा बोधक संरचना
7. कार्य-कारण सम्बन्ध संरचना
8. अनुक्रम संरचना
- इकाई-तीन (क) वसीयत : मालती जोशी
(ख) कार्यालयीन पत्र और आलेख
1. परिपत्र
2. आदेश
3. अधिसूचना
4. ज्ञापन
5. अनुस्मारक
6. पृष्ठांकन
- इकाई-चार (क) योग की शक्ति : हरिवंश राय बच्चन
(ख) अनुवाद : स्वरूप एवं परिभाषा, उद्देश्य
स्रोत भाषा और लक्ष्य भाषा,
अच्छे अनुवाद की विशेषताएँ,
अनुवाद प्रक्रिया, अनुवादक
- इकाई-पांच (क) संस्कृति और राष्ट्रीय एकीकरण : योगेश अटल
(ख) घटनाओं, समारोहों आदि का प्रतिवेदन, विभिन्न प्रकार के निमंत्रण पत्र

मूल्यांकन योजना : प्रत्येक इकाई से एक-एक प्रश्न पूछा जाएगा। प्रत्येक प्रश्न में आंतरित विकल्प होगा। प्रत्येक प्रश्न के 15 अंक होंगे। इसलिए प्रत्येक प्रश्न के दो भाग 'क' और 'ख' होंगे एवं अंक क्रमशः 8 एवं 7 अंक होंगे। प्रश्नपत्र का पूर्णांक 75 निर्धारित है।

5/7/2024

डा. आशा निवान

Arshita Shrivastava

The question paper for B.A./B.Sc./B.Com./B.H.Sc. III Foundation course, English Language and General Answers shall comprise the following items :

Five question to be attempted, each carrying 3 marks.

UNIT-I Essay type answer in about 200 words. 5 essay type question to be asked three to be attempted.	15
UNIT-II Essay writing	10
UNIT-III Precise writing	10
UNIT-IV (a) Reading comprehension of an unseen passage	05
(b) Vocabulary based on text	10
UNIT-V Grammar Advanced Exercises	25

Note: Question on unit I and IV (b) shall be asked from the prescribed text. Which will comprise of popular create writing and the following items. Minimum needs housing and transport Geo-economic profile of M.P. communication Educate and culture. Women and Worm in Empowerment Development, management of change, physical quality of life. War and human survival, the question of human social value survival, the question of human social value, new Economic Philosophy Recent Diberaliation Method) Demoration decentralization (with reference to 73, 74 constitutional Amendment.

Books Prescribed:

Aspects of English Language and Development - Published by M.P. Hindi Granth Academy, Bhopal.

Hemchand Yadav Vishwavidyalaya, Durg (C.G.)

SYLLABUS

B.COM. PART-III

GROUPING OF SUBJECTS AND SCHEME OF EXAMINATION

Subject		Max.	Min.
Foundation Course			
I. Hindi Language		75	26
II. English Language		75	26
Compulsory Groups			
Group-I			
I. Income Tax	75	150	50
II. Auditing	75		
Group-II			
I. Indirect Taxes with GST	75	150	50
II. Management Accounting	75		
Group-III Optional			
Option Group A (Finance Area)			
I. Financial Management	75	150	50
II. Financial Market Operations	75		
Option Group B (Marketing Area)			
I. Principles of Marketing	75	150	50
II. International Marketing	75		
Option Group C (Commercial Area)			
I. Information Technology and its Applications in Business	75	150	50
II. Essential of e-Commerce	75		
Option Group D (Money Banking & Insurance Area)			
I. Fundamental of Insurance	75	150	50
II. Money & Banking System	75		

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B.COM PART III
COMPULSORY CORE COURSE
TITLE OF PAPER - Group-I
PAPER – I - INCOME TAX

OBJECTIVE

It enables the students to know the basics of Income Tax Act and its implications.

M.M. 75

- UNIT- I** Basic Concepts: Income, agricultural Income, casual income, assessment year, previous year, gross total income, total income, person.
Basis of charge: Scope of total income, residence and tax liability, income which does not form part of total income.
- UNIT- II** Heads of Income: Salaries; Income from house property.
- UNIT- III** Profit and gains of business or profession, including provisions relating to specific business; Capital gains, Income from other sources.
- UNIT-IV** Computation of Tax Liability: Set-off and carry forward of losses; Deduction from gross total income. Aggregation of income; Computation of total income and tax liability of individual and HUF.
- UNIT-V** Tax Management: Tax deduction at source; Advance payment of tax; Assessment procedures; Tax planning for individuals.
Tax evasion, Tax Avoidance and Tax planning. Tax Administration: Authorities, appeals, penalties.
Preparation of return of income
-Manually and on line

Suggested Reading:

1. Singhania V.K.: Students Guide to Income Tax; Taxmann, Delhi.
2. Prasad, Bhagwati: Income Tax Law & Practice; Wily Publication, New Delhi.
3. Mehrotra H.C.: Income Tax Law & Accounts: Sahitya Bhawan, Agra.
4. Girish Ahuja and Ravi Gupta: Systematic approach to income tax: Sahitya Bhawan Publications, New Delhi.
5. Chandra Mahesh and Shukla D.C.: Income Tax Law and Practice; Pragati Publications, New Delhi.
6. R.K. Jain: Income Tax & Law (Hindi & English) Shahitya Bhavan, Publication, Agra.


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B.COM PART III
COMPULSORY CORE COURSE
TITLE OF PAPER - Group-I
PAPER – II- AUDITING

M.M. 75

OBJECTIVE

This course aims at imparting knowledge about the principles and methods of auditing and their applications.

UNIT-I Introduction: Meaning and objectives of auditing; Types of audit; Internal audit. Audit Process: Audit programme; Audit note books; Working papers and evidences.

UNIT-II Internal Check System: Internal control.
Audit Procedure: Vouching; Verification of assets and liabilities.

UNIT-III Audit of Limited Companies:
a. Company auditor – Qualification, Appointment, powers, duties, Resignation and liabilities.
b. Divisible profits and dividend.
c. Auditor's report - standard report and qualified report.
d. Special audit of banking companies.
e. Audit of educational institutions.
f. Audit of Insurance companies.

UNIT-IV Investigation: Investigation; Audit of non profit companies,
a. Where fraud is suspected, and
b. When a running a business is proposed.
c. Verifications & Valuation of assets.

UNIT-V Recent Trends in Auditing: Nature and significance of cost audit; Tax audit;
Management audit.

Suggested Reading:

1. Gupta KaPal: Contemporary Auditing: Tata Mcgraw Hill, New Delhi.
2. Tandon B.N.: Principles of Auditing: S. Chand & Co., New Delhi.
3. Pagare Dinkar: Principles and Practice of Auditing: Sultan Chand, New Delhi.
4. Sharma T.R.: Auditing Principles and Problems, SahityaBhawan, Agra.
5. Shukla S.M.: Auditing - ShahityaBhavan, Agra, (Hindi)
6. Batliboy: Auditing.


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B.COM PART III
COMPULSORY CORE COURSE

PAPER – II

Group-II -PAPER – I - INDIRECT TAXES WITH GST

OBJECTIVE

This course aims at imparting basic knowledge about GST and apply the provisions of GST law to various situations.

M.M. 75

- UNIT-I** Customs : Role of customs in international trade; Important terms and definitions goods; Duty; Exporter; Foreign going vessel; Aircraft goods; Import; Import Manifest; Importer; Prohibited goods; Shipping bill; Store; Bill of lading; Export manifest; Letter of credit; Kinds of duties - basic, auxiliary, additional or countervailing; Basics of levy ad valorem, specific duties; Prohibition of export and import of goods, and provisions regarding notified & specified goods; Import of goods - Free import and restricted import; Type of import - import of cargo, import of personal baggage, import of stores. Clearance Procedure - For home consumption, for warehousing for re-export; Clearance procedure for import by post; Prohibited exports; Canalised exports; Export against licensing; Type of exports export of cargo, export of baggage; Export of cargo by land, sea, and air routes.
- UNIT-II** State Excise, CENVAT. Detail study of State Excise during calculation of Tax.
- UNIT-III** INTRODUCTION TO GOODS AND SERVICES TAX (GST) -Objectives and basic scheme of GST, Meaning – Salient features of GST – Subsuming of taxes –Benefits of implementing GST , Structure of GST (Dual Model) – Central GST – State / Union Territory GST – Integrated GST
GST Council: Structures Power and Functions. Provisions from amendments.
- UNIT-IV** Registration under GST: Procedure for registration, Persons liable for registration, Persons not liable for registration, Compulsory registration. Exempted goods and services - Rates of GST.
Procedure relating to Levy: (CGST & SGST): Scope of supply, Tax liability on Mixed and Composite supply, Time of supply of goods and services, Value of taxable supply.

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UNIT-V ASSESSMENT AND RETURNS -

Input tax Credit: Eligibility, Apportionment, Inputs on capital goods,
Distribution of credit by Input Service Distributor (ISD)
Furnishing details of outward supplies and inward supplies, First return,
Annual return and Final return.

Suggested Reading:

1. Deloitte: GST Era Beckons, Wolters Kluwer.
2. Madhukar N Hiregange: Goods and Services Tax, Wolters Kluwer.
3. All About GST: V.S Datey - Taxman's.
4. Guide to GST: CA. Rajat Mohan,
5. Goods & Services Tax – Indian Journey: N.K. Gupta & Sunnania Batia, Barat's Publication
6. Goods & Services Tax – CA. Rajat Mohan,
7. Goods & Services Tax: Dr. Sanjiv Agrawal & CA. Sanjeev Malhotra.
8. GST - Law & Practice: Dr. B.G. Bhaskara, Manjunath. N & Naveen Kumar IM,
9. Understanding GST: Kamal Garg, Barat's Publication.

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B.COM PART III
COMPULSORY CORE COURSE
TITLE OF PAPER -Group-II
PAPER – II -MANAGEMENT ACCOUNTING

OBJECTIVE

This course provides the students an understanding of the application of accounting techniques for management.

M.M. 75

- UNIT-I** Management Accounting : Meaning, nature, scope, and functions of management Accounting; Role of management accounting in decision making; Management accounting vs financial accounting; Tools and techniques of management accounting; Financial statement; Objectives and methods of financial statements analysis; Ratio analysis; Classification of ratios - Profitability ratios, turnover ratios, liquidity ratios, turnover ratios; Advantages of ratio analysis; Limitations of accounting ratios.
- UNIT-II** Funds Flow Statement as per Indian Accounting Standard 3, cash flow statement.
- UNIT-III** Absorption and Marginal Costing: Marginal and differential costing as a tool for decision making - make or buy; Change of product mix; Pricing, Break-even analysis;
Exploring new markets; Shutdown decisions.
- UNIT-IV** Budgeting for profit Planning and control: Meaning of budget and budgetary control; Objectives; Merits and limitations; Types of budgets; Fixed and flexible budgeting;
Control ratios; Zero base budgeting; Responsibility accounting;
Performance Budgeting.
- UNIT-V** Standard Costing and Variance Analysis: Meaning of standard cost and standard costing; Advantages and application; Variance analysis - material; Labour and overhead (Two-way analysis); Variances.

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Suggested Reading:

1. Arora M.N.: Cost Accounting - Principles and Practice, Vikas, New Delhi.
2. Jain S.P. & Narang K.L.: Cost Accounting; Kalyani, New Delhi.
3. Anthony, Rogert & Reece, at al: Principles of Management Accounting; Richard Irwin Inc.
4. Horngren, Charles, Foster and Datar et al: Cost Accounting - A Managerial Emphasis; Prentice Hall, New Delhi.
5. Khan M.Y. and Jain P.K.: Management Accounting: Tata McGraw Hill, New Delhi.
6. Kaplan R.S. and Atkonson A.A.: Advanced Management Accounting; Printice Hall India, New Delhi.
7. J.K. Agrawal & R.K. Agrawal: Jaipur (English & Hindi).
8. Dr. M.R. Agrawal: Minakshi Prakashan Meruth.
9. Dr. S.P. Gupta - Agra (Hindi & English).


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B.COM PART III
OPTIONAL GROUP A (Finance Area)
TITLE OF PAPER - FINANCIAL MANAGEMENT
PAPER – I

OBJECTIVE

The objective of this course is to help students understand the conceptual framework of financial management.

M.M. 75

- UNIT-I** Financial Management: Financial goals; Profit vs wealth maximization; Financial functions-investment, financing, and dividend decisions; Financial planning.
- UNIT-II** Capital Budgeting : Nature of investment decisions, Investment evaluation criteria, payback period, accounting rate of return, net present value, internal rate of return profitability index; NPV and IRR comparison.
- UNIT-III** Cost of Capital: Significance of cost of capital; Calculating cost of debt; Preference shares, equity capital, and retained earnings; Combined (weighted) cost of capital. Operating and financial Leverage : Their measure; Effects on profit, analyzing alternate financial plans, combined financial and operating leverage.
- UNIT-IV** Capital Structure: Theories and determinates. Dividend Policies: Issues in dividend policies; Walter's model; Gordon's model; M.M.Hypothesis, forms of dividends and stability in dividends, determinants.
- UNIT-V** Management of Working Capital: Nature of working capital, significance of working capital, operating cycle and factors determining of working capital requirements, Management of working capital - cash, receivables, and inventories.

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Suggested Reading:

1. Van Home J.C. : Financial Management and Policy; Prentice Hall of India, New Delhi.
2. Khan M.Y. and Jain P.K. : Financial Management, Text and Problems; Tata McGraw Hill, New Delhi.
3. Prasanna Chandra L Financial Management Theory and practice; Tata McGraw Hill, New Delhi.
4. Pandey I.M.: Financial Management Vikas Publishing Hous, New Delhi.
5. Brigham E.F. Gapenski L.C., and Ehrhardt M.C.: Financial Management - Theory and Practice; Harcourt College Publishers, Singapore.
6. Bhalla V.K.: Modern Working Capital Management, Anmol Pub. Delhi.


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B.COM PART III
OPTIONAL GROUP A (Finance Area)
TITLE OF PAPER - FINANCIAL MARKET OPERATIONS
PAPER - II

OBJECTIVE

This course aims at acquainting the students with the working of financial markets in India.

M.M. 75

- UNIT-I** Money Market: Indian money market's composition and structure; (a) Acceptance houses, (b) Discount houses and (c) Call money market; Recent trends in Indian money market.
- UNIT-II** Capital Market: Security market - (a) New issue market, (b) Secondary market;
Functions and role of stock exchange; listing procedure and legal requirements; Public issue - pricing and marketing; Stock exchanges - National Stock Exchange, Bombay stock exchange
- UNIT-III** Securities contract and Regulations Act: Main provisions. Investors Protection: Grievances concerning stock exchange dealings and their removal; Grievance cells in stock exchanges; SEBI; Company Law Board; Press;
Remedy through courts.
- UNIT-IV** Functionaries on Stock Exchanges: Brokers, sub brokers, market makers, jobbers, portfolio consultants, institutional investors, and NRIs.
- UNIT-V** Financial Services: Merchant banking - Functions and roles; SEBI guidelines; Credit rating - concept, functions, and types.

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Suggested Reading:

1. Chandler M.V. and Goldfeld S.M.: Economics of money and Banking, Harper and Row, New Delhi.
2. Gupta Suraj B. Monetary Economics; s. chand and Co. New Delhi.
3. Gupta Suraj B. Monetary Planning in India; Oxford, Delhi.
4. Bhole L.M.: Financial Markets and Institutions: Tata McGraw Hill, New Delhi.
5. Hooda R.P.: Indian Securities Market - Investors view point; Excell Books, New Delhi.
6. R.B.I.: Functions and Working.
7. R.B.I.: Report in Currency and Finance.
8. R.B.I.: Report of the Committee to Review the working of the monetary system Chakravarty committee.
9. R.B.I.: Report of the Committee on the Financial System, Narsimham Committee.


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B.COM PART III
OPTIONAL GROUP B (Marketing Area)
TITLE OF PAPER -PRINCIPLES OF MARKETING
PAPER – I

OBJECTIVE

The Objective of this course is to help students to understand the concept of marketing and its applications.

M.M. 75

- UNIT-I** Introduction: Nature and scope of marketing; Importance of marketing as a business function, and in the economy; Marketing concepts - traditional and modern; Selling vs. Marketing; Marketing mix; Marketing environment.
- UNIT-II** Consumer Behaviour and Market Segmentation: Nature, scope, and significance of consumer behaviour; Market segmentation - concept and importance; Bases for market segmentation.
- UNIT-III** Product: Concept of product, consumer, and industrial goods; Product planning and development; Packaging role and functions; Brand name and trade mark; after sales service; Product life cycle concept. Price: Importance of price in the marketing mix; Factors affecting price of a product/service; Discounts and rebates.
- UNIT-IV** Distributions Channels and Physical Distribution; Distribution channels - Concept and role; Types of distribution channels. Factors affecting choice of a distribution channel; Retailer and wholesaler; Physical distribution of goods; Transportation, Warehousing, Inventory control; Order processing.
- UNIT-V** Promotion: Methods of promotion; Optimum promotion mix; Advertising media – the relative merits and limitations; Characteristics of an effective advertisement; Personal selling; Selling as a career; Classification of successful sales person; Functions of sales man.
Recent development in marketing – social marketing, online marketing, direct marketing, Services marketing, Green marketing.


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Suggested Reading:

1. Philip Kotler: Marketing Management Englewood Cliffs; Prentice Hall, N.J.
2. William M. Pride and O.C. Ferrell: Marketing: Houghton - Mifflin Boston.
3. Stanton W.J. Etzel Michael J., and Walker Bruce J. Fundamentals of Marketing; McGrawHill, New York.
4. Lamb Charies W., Hair Joseph F. and McDaniel Carl : Principles of Marketing; South-Western-Publishing, Cincinnati, Ohio.
5. Cravens David W. Hills Gerald E., Woodruff Robert B : Marketing management : RichardD. Inwin, Home wood Illinois.
6. Kotler Philip and Armstrong Gary : Principles of Marketing; Prentice Hall of India, New Delhi.
7. Dr. R.C. Agrawal, Agra.
8. Dr. S.C. Saxena Agra.
9. Dr. S.K. Jain, Hindi GranthAcademi. M.P.
10. Dr. N.C. Jain


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B.COM PART III
OPTIONAL GROUP B (Marketing Area)
TITLE OF PAPER -INTERNATIONAL MARKETING
PAPER – II

OBJECTIVE

This course aims at acquainting student with the operations of marketing in international environment.

M.M. 75

- UNIT-I** International Marketing: Nature, definition, and scope of international marketing; Domestic marketing vs. International marketing; International environment external and internal.
- UNIT-II** Identifying and Selecting Foreign Market: Foreign market entry mode decisions. Product Planning for international Market: Product designing; Standardization vs. adaptation; Branding and packaging; Labeling and quality issues; after sales service. International pricing: Factors influencing International price; Pricing process-process and methods; International price quotation and payment terms.
- UNIT-III** Promotion of Product/Services Abroad: Methods of international promotion; Direct mail and sales literature; Advertising; Personal selling; Trade fairs and exhibitions.
- UNIT-IV** International Distribution: Distribution channels and logistics decisions; Selection and appointment of foreign sales agents.
- UNIT-V** Export Policy and Practices in India: Exim policy - an overview; Trends in India's foreign trade; Steps in starting an export business; Product selection; Market Selection; Export pricing; Export finance; Documentation; Export procedures; Export Assistance and incentives. Marketing Control Process

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Suggested Reading:

1. Bhattacharya R.L. and Varshney B.: International Marketing Management; Sultan Chand, New Delhi.
2. Bhattacharya B. : Export Marketing Strategies for Success; Global Press, New Delhi.
3. Keegan W.J.: Multinational Marketing Management; Prentice Hall, New Delhi.
4. Kriplani V.: International marketing; Prentice Hall New Delhi.
5. Taggart J.H. and Moder Mott. M.C.: The Essence of International Business; Prentice Hall New Delhi.
6. Kotler Phillip: Principles of Marketing; Prentice Hall New Delhi.
7. Fayer Weather John: International Marketing; Prentice Hall N.J.
8. Caterora P.M. and Keavenay S.M.: Marketing an international Perspective; Erwin Homewood, Illinois.
9. Paliwala, Stanely J. The Essence of International marketing; Prentice Hall, NewDelhi.

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B.COM PART III
OPTIONAL GROUP C (Commercial Area)
TITLE OF PAPER - INFORMATION TECHNOLOGY AND ITS
APPLICATIONS IN BUSINESS
PAPER – I

OBJECTIVE

The objective of the course is to familiarize the students with the innovation information technology and how it affects business. An understanding of the group rules of these technologies will enable the students to appreciate the nitty-gritty Commerce.

M.M. 75

UNIT-I Information Revolution and information Technology (IT) : Deployment of Business; Basic features of IT; Impact of IT on business environment and social fabric; Invention of writing; Written books; Printing Press and movable type Gutenberg's invention; Radio; telephone, wireless and satellite communication computing and dissemination of information and knowledge and convergence technologies (Internet with Wireless-WAP).

UNIT-II Fundamentals of Computer: Data, information and EDP: Data, information and concept of data and information; Levels of information from data; processing; Electronic data processing; Electronic machines;

- a. Number Systems and Codes: Different number systems - binary, octal decimal, hexagonal, and their conversion codes used in computers; BCD, EBCDIC, ASCII; Gray and conversions.
- b. Computer Arithmetic and Gates: Binary arithmetic, complements, addition subtraction; Conversion from one system to another; Logic Gates, truth table and applications minimisation, and K-maps.
- c. Computer Processing System: Definition of computer; Hardware/Software concepts; Generation of computers; Types of computers; Elements of computer; CPU and its functions, various computer systems.
- d. I/O devices: Basic concepts of I/O devices; various input devices Keyboard, mouse; MICR, OCR, microphones.
- e. Various output devices: VDU, printer, plotter, spooling, L.S.
- f. Storage Devices: Primary and secondary memory; Types of memory capacity and its enhancement; Memory devices and comparisons; Auxiliary storage, tapes, disks (magnetic and optical); various devices and their comparison.


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- g. System Software - Role of Software, Different System Software: O.S., utilization element of O.S. - Its types and variations; DOS and windows.
- h. Computer and Networks: Need of communication; Data transmission; Baud; Bandwidth; Communication Channel; Multiplexing; Basic network concepts; O.S.I. model; Types of topologies; LAN, WAN, Client server concept.

UNIT-III Computer-based Business Applications

- a. Word Processing : Meaning and role of word processing in creating of documents, editing, formatting, and printing documents, using tools such as spelling check, thesaurus, etc. in word processors (MS-Word).
- b. Electronic Spreadsheet : Structure of spreadsheet and its applications to accounting, finance, and marketing functions of business; Creating a dynamic/sensitive worksheet; Concept of absolute and relative cell reference; Using built-in functions; Goal seeking and solver tool; Using graphics and formatting of Worksheet; sharing data with other desktop applications; Strategies of creating error-free worksheet (MS-Excel, Lotus 123). Practical knowledge on Wings Accounting (Software).
- c. Programming under a DBMS environment: The concept of data base management system; Data field, records, and files, Sorting and indexing data; Searching records, designing queries, and reports; Linking of data files; Understanding programming environment in DBMS; Developing menu driven applications in query language (MS-Access).

UNIT-IV Electronic Data Interchange (EDI), Introduction to EDI; Basics of EDI; EDI standards; Financial EDI (FEDI); FEDI for international trade transaction; Applications of EDI; Advantages of EDI; Future of EDI.

UNIT-V The Internet and its Basic Concepts Internet-concept, history development in India; Technological foundation of internet; Distributed computing; Client-server computing; Internet protocol suite; Application of distributed computing; Client-server computing; Internet protocol suite in the internet environment; Domain Name System (DNS); Domain Name Service (DNS); Generic top-level domain (gTLD); Country code top-level domain (ccTLD); - India; Location of second-level domains; IP addresses; Internet protocol; Applications of Internet in business, education, governance, etc. Information System Audit Basic idea of information audit; Difference with the traditional concepts of audit; Conduct and applications of IS audit in internet environment.

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Suggested Reading:

1. Agrawala Kamlesh N. and Agarwala Deeksha: Business on the Net - Introduction to Ecommerce, Macmillan India, New Delhi.
2. Agrawala Kamlesh, N. and Agarwala Deeksha: Bulls, Bears and The mouse; and introduction to On-line Service Market Trading; Macmillan India, New Delhi.
2. Agarwala Kamlesh, N. and Agarwala Prateek Amar; WAP the Net; an Introduction on Wireless Application Protocol; Macmillan India, New Delhi.
3. Bajaj Kamlesh K. and Nag Debjani: E-Commerce; The cutting Edge of Business; Tata McGraw Hill, New Delhi.
4. Edwards, Ward and Bytheway : The Essence of Information Systems; Prentice Hall, New Delhi.
5. Garg & Srinivasan: Work Book on Systems Analysis & Design; Prentice Hall New Delhi.
7. Kanter: Managing with Information; Prentice Hall New Delhi.
8. Minoli Daniel, Minoli Emma: Web Commerce Technology Handbook; Tata McGraw Hill, New Delhi.
9. Minoli Daniel: Internet & Internet Engineering; Tata McGraw Hill, New Delhi.
10. Yeats: Systems Analysis & Design; Macmillan India, New Delhi.
11. Goyal: Management information System; Macmillan India, New Delhi.
12. Timothy J O'Leary: Microsoft Office 2000; Tata McGraw Hill, New Delhi.

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B.COM PART III
OPTIONAL GROUP C (E-Commerce Area)
TITLE OF PAPER -ESSENTIAL OF E-COMMERCE
PAPER – II

OBJECTIVE

The objective of this course is to familiarize the students with the basics of e-commerce and to comprehend its potential.

M.M. 75

UNIT-I Internet and Commerce: Business operations; E-Commerce practices; Concepts b2b, b2c, b2g, g2h; Benefits of e commerce to organization, consumers, and society; Limitation of e-commerce; Management issues relating to e-commerce.

Operations of E-Commerce: Credit card transaction; Secure Hypertext Transfer Protocol (SHTTP); Electronic payment systems; secure electronic transaction (SET); Set's encryption; Process; Cybercash; Smart cards; Indian payment models.

UNIT-II Applications in B2C: Consumer's shopping procedure on the internet; Impact on disintermediation and re-intermediation; Global market; Strategy of traditional department stores; Products in b2c model; Success factors of e-brokers; Broker based services on-line; Online travel tourism services; Benefits and impact of e-commerce on travel industry; Real estate market; Online stock trading and its benefits; Online banking and its benefits; Online financial services and their future; Educations benefits, implementation, and impact.

UNIT-III Applications in B2B; Applications of b2b, Key technologies for b2b; Architectural models of b2b; Characteristics of the supplier-oriented marketplace, buyer-oriented market place, and intermediary-oriented marketplace; Benefits of b2b on procurement re-engineering; Just in Time delivery in b2b; Internet-based EDI from traditional EDI; Integrating EC with back-end information systems; Marketing issues in b2b.

UNIT-IV Applications in Governance: EDI in governance; E-government; E-governance applications of the internet; Concept of government to business, business to government and citizen-to-government; E-governance models; Private sector interface in e-governance.

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UNIT-V Emerging Business Models: Retail model; Media model; Advisory model, Mode-to-order manufacturing model; Do-it yourself model; Information service model; Emerging hybrid models; Emerging models in India. Security and Legal aspects of E-commerce.

Suggested Reading:

1. Agarwala Kamlesh. N. and Agarwala Deeksha: Bridge to Online Storefront; Macmillan India, New Delhi.
2. Agarwala Kamlesh. N. and Agarwala Deeksha: Business on the Net Introduction to the E-commerce; Macmillan India New Delhi.
3. Agarwala Kamlesh N. and Agarwala Deeksha: Bulls, Bears and The Mouse: An Introduction to Online Stock Market Trading; Macmillan India New Delhi.
4. Tiwari Dr. Murli D.: Education and E-Governance; Macmillan India, New Delhi.
5. Minoli Daniel, Minoli Emma: Web Commerce Technology Handbook; Tata McGraw Hill, New Delhi.
6. Minoli Deniel, Internet & Internet Engineering: Tata McGraw Hill, 1999.
7. Bhatnagar Subhash and Schwabe Robert (Eds): Information and Communication Technology in Development; Sage Publications India, New Delhi.
7. Amor, Daniel: E-business Reevaluation, The : Living and Working in an Interconnected World; Prentice Hall, U.S.
8. Afuah, A., and Tuccu, C.: Internet business models and Strategies; McGraw Hill, New York.

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B.COM PART III
OPTIONAL GROUP D (Money Banking & Insurance Area)
TITLE OF PAPER FUNDAMENTAL OF INSURANCE
PAPER – I

OBJECTIVE

This course enables the students to know the fundamentals of insurance.

M.M. 75

- UNIT-I** Introduction to Insurance: Purpose and need of insurance; Insurance as a social security tool; Insurance and economic development.
- UNIT-II** Fundamentals of Agency Law: Definition of an agent; Agents regulations; Insurance intermediaries; Agents compensation.
- UNIT-III** Procedure for Becoming an Agent : Prerequisite for obtaining a license; Duration of license; Cancellation of license; Revocation or suspension/termination of agent appointment; Code of conduct; Unfair practices. Functions of the Agent: Proposal form and other forms for grant of cover; Financial and medical underwriting; Material information; Nomination and assignment; Procedure regarding settlement of policy claims.
- UNIT-IV** Company Profile : organizational set-up of the company; Promotion strategy; Market share; Important activities; Structure; Product; Actuarial profession; Product pricing actuarial aspects; Distribution channels.
- UNIT-V** Fundamentals/Principles of Life insurance/ Marine /Fire /Medical/General Insurance; Contracts of various kinds; Insurable Interest. Online insurance procedure

Suggested Reading:

1. Mishra M.N.: Insurance Principle and Practice; S. Chand and Co., New Delhi.
2. Insurance Regulatory Development Act. 1999.
3. Life Insurance Corporation Act. 1956.
4. Gupta OS: Life Insurance; Frank brothers, New Delhi.
5. Vinayakam N., Radhaswamy and Vasudevan SV: Insurance - Principles and Practice,
S. Chand and Co. New Delhi.
6. Mishra MN: Life Insurance Corporation of India, Vols I, II & III; Raj Books, Jaipur.
7. BalchandShriwastava, Agra.
8. Dr. M.L. Singhai, RAmesh Book Depot, Jaipur.

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B.COM PART III
OPTIONAL GROUP D (Money Banking & Insurance Area)
TITLE OF PAPER - MONEY & BANKING SYSTEM
PAPER -II

OBJECTIVE

This course enables the students to know the working of the Indian Money & banking system.

M.M. 75

- UNIT-I** Money: Function, Alternative Measures to money supply in India - their different components. Meaning and changing relative importance of each.
- UNIT-II** Indian Banking System : Structure and organization of banks; Reserve Bank of India; Apex banking Institutions; Commercial banks; Regional rural banks; Cooperative banks; Development banks.
- UNIT-III** Banking Regulation Act, 1947 : History; Social control; Banking Regulation Act as applicable to banking companies and public sector banks; Banking Regulation Act as applicable to Cooperative banks.
- UNIT-IV** Regional Rural and Cooperative Banks in India: Functions; Role of regional rural and cooperative banks in rural India; Progress and performance.
- UNIT-V** Reserve Bank of India: Objectives; Organization; Functions and working; Monetary policy; Credit control measures and their effectiveness.
State Bank of India, Project History, Objectives, Functions & Organization working & progress.
Internet banking system

Suggested Reading:

1. Basu A.K.: Fundamentals of Banking-Theory and Practice; a Mukherjee and Co., Calcutta.
2. Sayers R.S.: Modern Banking: Oxford University Press.
3. Panandikar S.G. And Mithani D.M.: Banking in India; orient Longman.
4. Reserve Bank of India: Functions and Working.
5. Dekock: Central Banking; Crosby lock wood Staples, London.
6. Tannan M.L.: Banking - Law and Practice in India: India Law House, New Delhi.
7. Knubchandani B.S.: Practice and Law of Banking; Macmillan, New Delhi.
8. Shekhar and Shekhar: Banking Theory and Practice; Vikas Publishing House, New Delhi.
9. Harishchandra Sharma.
10. M.L. Singhai.


20/10/19 20/10/19 20/10/19



हेमचंद्र यादव विश्वविद्यालय, दुर्ग (छ.ग.)

(पूर्व नाम- दुर्ग विश्वविद्यालय, दुर्ग)

रायपुर नका, दुर्ग (छ.ग.)-491001

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क्र. 477 /अका./2023

दुर्ग, दिनांक : 23/06/2023

प्राचार्य,

समस्त संबद्ध महाविद्यालय,

हेमचंद्र यादव विश्वविद्यालय,

दुर्ग (छ.ग.)

विषय:- स्नातक स्तर के नयीन पाठ्यक्रम के भाग-एक को सत्र 2023-24 से विश्वविद्यालय में लागू करने विषयक।
संदर्भ:- अपर संचालक, उच्च शिक्षा संचालनालय, नया रायपुर, अटल नगर का पत्र क्र. 3985/237/आलशि/2023, दिनांक 13.06.2023।

—00—

विषयांतर्गत लेख है कि संदर्भित पत्र के माध्यम से प्राप्त स्नातक स्तर भाग-एक के निम्नलिखित कक्षा/विषयों के परिवर्तित/संशोधित पाठ्यक्रम शिक्षा सत्र 2023-24 से लागू किये जाते हैं:-

1. बी.ए. - आधार पाठ्यक्रम-हिन्दी भाषा, अंग्रेजी भाषा, हिन्दी साहित्य, अंग्रेजी साहित्य, राजनीतिशास्त्र, अर्थशास्त्र, नृत्य, दर्शनशास्त्र, समाजशास्त्र, इतिहास, संस्कृत, मानवविज्ञान, भूगोल, मनोविज्ञान, सांख्यिकी, कम्प्यूटर।
2. बी.एस-सी. - आधार पाठ्यक्रम-हिन्दी भाषा, अंग्रेजी भाषा, जीव विज्ञान, मानवविज्ञान, गणित, बायोटेक्नोलॉजी, कम्प्यूटर साईंस, भौतिकी, प्राणीशास्त्र, भूविज्ञान, आई.टी., सूक्ष्मजीवविज्ञान, वनस्पतिशास्त्र, इलेक्ट्रॉनिक्स, रसायन शास्त्र, सांख्यिकी, भूगोल।
3. बी.एस-सी. (गृह विज्ञान) - आधार पाठ्यक्रम - हिन्दी भाषा, अंग्रेजी भाषा एवं गृह विज्ञान।
4. बी.कॉम. - आधार पाठ्यक्रम - हिन्दी भाषा, अंग्रेजी भाषा एवं वाणिज्य।
5. विधि - एल.एल.बी., बी.ए.एल.एल.बी
6. प्रबंध - बी.बी.ए.
7. कम्प्यूटर - बी.सी.ए.
8. शिक्षा - बी.एड.
9. लाइब्रेरी साईंस - बी. लिब.

उपरोक्त विषयों को शिक्षा सत्र 2023-24 से संशोधित रूप में स्नातक स्तर भाग-एक के लिए लागू किया जाता है स्नातक स्तर भाग दो एवं तीन के पाठ्यक्रम यथावत रहेंगे।

अतः आपसे अनुरोध है कि पाठ्यक्रम परिवर्तन/संशोधन से महाविद्यालय के शिक्षकों एवं छात्र-छात्राओं को अवगत कराने का कष्ट करेंगे।

टीप :- परिवर्तित/संशोधित पाठ्यक्रम विश्वविद्यालय की वेबसाइट पर उपलब्ध है।

संलग्न : उपरोक्तानुसार।


कुलसचिव

क्र. 478 /अका./2023

दुर्ग, दिनांक 23.06.2023

प्रतिलिपि:-

1. अपर संचालक, उच्च शिक्षा संचालनालय, नवा रायपुर, अटल नगर का पत्र क्र. 3985/237/आउशि/2023, दिनांक 13.06.2023 के परिपेक्ष्य में सूचनार्थ।
2. कुलपति के निज सहायक एवं कुलसचिव के निज सहायक, हेमचंद यादव विश्वविद्यालय, दुर्ग।
3. उपकुलसचिव, परीक्षा विभाग एवं उपकुलसचिव, गोपनीय विभाग हेमचंद यादव विश्वविद्यालय, दुर्ग।


सहा. कुलसचिव (अका.)

B. Sc. Part-I

विषय-सूची

1. Revised Ordinance No. 21
2. Scheme of Examination
3. Environmental Studies
4. Foundation Course :आधार पाठ्यक्रम
प्रथम हिन्दी
द्वितीय –अंग्रेजी भाषा
Physics (भौतिक शास्त्र)
6. Chemistry (रासायन शास्त्र)
7. Zoology (प्राणी शास्त्र)
8. Botany (वनस्पति शास्त्र)
9. Mathematics (गणित)
10. Microbiology (सूक्ष्म जीव विज्ञान)
11. Geology (भू – विज्ञान)
12. Anthropology (मानव विज्ञान)
13. Statistics (सांख्यिकी)
14. Defense Studies (रक्षा अध्ययन)
15. Industrial Chemistry (औद्योगिक रसायन)
16. Computer Science
17. Electronics Equipment Maintenance
18. Electronics
19. Information Technologies
20. Industrial Microbiology
21. Bio Chemistry
22. Biotechnology

REVISED ORDINANCE NO. 21
BACHELOR OF SCIENCE

1. The three year course has been broken up into three Parts. Part-I known as B.Sc. Part-I examination at the end of the first year, Part-II known as B.Sc. Part-II examination at the end of the second year and Part-III known as B.Sc. Part-III examination at the end of the third year.
2. A candidate who after passing (10+2) Higher Secondary or Intermediate examination of C.G. Board of Secondary Education Bhopal or any other Examination recognized by the University or C.G. Board of Secondary Education as equivalent thereto, has attended a regular course of study in an affiliated College or in the Teaching Department of the University for one academic year shall be eligible for appearing at the B.Sc. Part-I examination.
3. A candidate who, after passing the B.Sc.-I examination of the University or any other examination recognized by the University as equivalent thereto, has attended a regular course of study for one academic year in an affiliated college or in the Teaching Department of the University shall be eligible for appearing at the B.Sc. Part-II examination.
4. A candidate who, after passing the B.Sc. Part-II examination of the University, has completed a regular course of study for one academic year in an affiliated college or in the Teaching Department of the University shall be eligible for appearing at the B.Sc. Part-III examination.
5. Besides regular students, subject to their compliance with this Ordinance ex-student and non-collegiate candidates shall be permitted to offer only such subjects/papers as are taught to the regular student at any of the University Teaching Department or College.
6. Every candidate appearing in B.Sc. Part-I, Part-II and Part-III examination shall be examined in-
 - (i) Foundation Course:
 - (ii) Any one of the following combinations of three subjects:-
 1. Physics, Chemistry & Mathematics.
 2. Chemistry, Botany & Zoology.
 3. Chemistry, Physics & Geology.
 4. Chemistry, Botany & Geology.
 5. Chemistry, Zoology & Geology.
 6. Geology, Physics & Mathematics.
 7. Chemistry, Mathematics & Geology.
 8. Chemistry, Botany & Defense Studies.
 9. Chemistry, Zoology & Defense Studies
 10. Physics, Mathematics & Defense Studies.
 11. Chemistry, Geology & Defense Studies

12. Physics, Mathematics & Statistics
13. Physics, Chemistry & Statistics
14. Chemistry, Mathematics & Statistics.
15. Chemistry, Zoology & Anthropology.
16. Chemistry, Botany & Anthropology.
17. Chemistry, Geology & Anthropology.
18. Chemistry, Mathematics & Statistics.
19. Chemistry, Anthropology & Defense Studies.
20. Geology, Mathematics & Statistics.
21. Mathematics, Defense Studies & Statistics
22. Anthropology, Mathematics & Statistics
23. Chemistry, Anthropology & Applied Statistics
24. Zoology, Botany & Anthropology
25. Physics, Mathematics & Electronics.
26. Physics, Mathematics & Computer Application
27. Chemistry, Mathematics & Computer Application
28. Chemistry, Bio-Chemistry & Pharmacy
29. Chemistry, Zoology & Fisheries.
30. Chemistry, Zoology & Agriculture
31. Chemistry, Zoology & Sericulture
32. Chemistry, Botany & Environmental Biology
33. Chemistry, Botany & Microbiology
34. Chemistry, Zoology & Microbiology
35. Chemistry, Industrial Chemistry & Mathematics
36. Chemistry, Industrial Chemistry & Zoology
37. Chemistry, Biochemistry, Botany
38. Chemistry, Biochemistry, Zoology
39. Chemistry, Biochemistry, Microbiology
40. Chemistry, Biotechnology, Botany
41. Chemistry, Biotechnology, Zoology
42. Geology, Chemistry & Geography
43. Geology, Mathematics & Geography
44. Mathematics, Physics & Geography
45. Chemistry, Botany & Geography

(iii) Practical in case prescribed for core subjects.

7. Any candidate who has passed the B.Sc. examination of the University shall be allowed to present himself for examination in any of the additional subjects prescribed for the B.Sc. examination and not taken by him at the degree examination. Such candidate will have to first appear and pass the B.Sc. Part-I examination in the subjects which he proposes to offer and then the B.Sc. Part-II and Part-III examination in the same subject. Successful candidates will be given a certificate to that effect.

8. In order to pass at any part of the three year degree course examination an examinee must obtain not less than 33% of the total marks in each subject/ group of subjects. In subject/ group of subjects where both theory and practical examination are provided an examinee must pass in both theory and practical parts of the examination separately.
9. Candidate will have to pass separately at the Part-I, Part-II and Part-III examinations. No division shall be assigned on the result of the Part-I and Part-II examination. In determining the division of the final examination, total marks obtained by the examinees in their Part-I, Part-II and Part-III examination in the aggregate shall be taken in to account. Provided in case of candidate who has passed the examination through supplementary examination having failed in one subject/ group only, the total aggregate marks being carried over for determining the division shall include actual marks obtained in the subject/ group in which he appeared at the supplementary examination.
10. Successful examinee at the Part-III examination obtaining 60% or more marks shall be places in the First Division, those obtaining less than 60% but not less than 45% marks in the Second Division and other successful examinees in the Third Division.

SCHEME OF EXAMINATION

Subject	Paper	Max. Mark	Total Marks	Min. Marks
Environmental Studies		75	100	33
Field Work		25		
Foundation Course				
Hindi Language	I	75	75	26
English Language	I	75	75	26
नोट— प्रत्येक खंड में से 2 दो प्रश्न हल करने होंगे। सभी प्रश्नपत्र समान अंक के होंगे।				
Three Elective Subject:				
1. Physics	I		50	
	II		50	100
	Practical			50
				17
2. Chemistry	I		33	
	II		33	100
	III		34	
	Practical			50
				17
3. Mathematics	I		50	
	II		50	150
	III		50	
4. Botany	I		50	
	II		50	100
	Practical			50
				17
5. Zoology	I		50	
	II		50	100
	Practical			50
				17
6. Geology	I		50	

		II	50	100	33
		Practical		50	17
7. Statistics	I		50		
	II		50	100	33
	Practical			50	17
8. Anthropology	I		50		
	II		50	100	33
	Practical			50	17

Subject	Paper	Max. Marks	Total Marks	Min. Marks
9. Defense Studies	I	50		
	II	50	100	33
	Practical		50	17
10. Micro Biology	I	50		
	II	50	100	33
	Practical		50	17
11. Computer Science	I	50		
	II	50	100	33
	Practical		50	17
12. Information Technology	I	50		
	II	50	100	33
	Practical		50	17
13. Industrial Chemistry	I	34		
	I	33	100	33
	II	33		
	Practical		50	17
14. Bio Chemistry	I	50		
	II	50	100	33
	Practical		50	17
15. Bio Technology	I	50		
	II	50	100	33
	Practical		50	17

USE OF CALCULATORS

The Students of Degree/P.G. Classes will be permitted to use of Calculators in the examination hall from annual 1986 examination on the following conditions as per decision of the standing committee of the Academic Council at its meeting held on 31-1-1986.

1. Student will bring their own Calculators.
2. Calculators will not be provided either by the University or examination centres.
3. Calculators with, memory and following variables be permitted +, -, x, , square, reciprocal, exponentials log, square root, trigonometric functions, wize, sine, cosine, tangent etc. factorial summation, xy, yx and in the light of objective approval of merits and demerits of the viva only will be allowed.

Part - I
SYLLABUS FORENVIRONMENTAL STUDIES AND HUMAN RIGHTS
(Paper code-0828)

MM. 75

इन्वायरमेंटल साईंसेस के पाठ्यक्रम को स्नातक स्तर भाग—एक की कक्षाओं में विश्वविद्यालय अनुदान आयोग के निर्देशानुसार अनिवार्य रूप से शिक्षा सत्र 2003—2004 (परीक्षा 2004) से प्रभावशील किया गया है। स्वशासी महाविद्यालयों द्वारा भी अनिवार्य रूप से अंगीकृत किया जाएगा।

भाग 1, 2 एवं 3 में से किसी भी वर्ष में पर्यावरण प्रश्न—पत्र उत्तीर्ण करना अनिवार्य है। तभी उपाधि प्रदाय योग्य होगी।

पाठ्यक्रम 100 अंकों का होगा, जिसमें से 75 अंक सैद्धांतिक प्रश्नों पर होंगे एवं 25 अंक क्षेत्रीय कार्य (Field Work) पर्यावरण पर होंगे।

सैद्धांतिक प्रश्नों पर अंक — 75 (सभी प्रश्न इकाई आधार पर रहेंगे जिसमें विकल्प रहेगा)

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|----------------------|---|--------|
| (अ) लघु प्रश्नोंत्तर | — | 25 अंक |
| (ब) निबंधात्मक | — | 50 अंक |

Field Work- 25 अंकों का मूल्यांकन आंतरिक मूल्यांकन पद्धति से कर विश्वविद्यालय को प्रेषित किया जावेगा। अभिलेखों की प्रायोगिक उत्तर पुस्तिकाओं के समान संबंधित महाविद्यालयों द्वारा सुरक्षित रखेंगे।

उपरोक्त पाठ्यक्रम से संबंधित परीक्षा का आयोजन वार्षिक परीक्षा के साथ किया जाएगा। पर्यावरण विज्ञान विषय अनिवार्य विषय है, जिसमें अनुत्तीर्ण होने पर स्नातक स्तर भाग—एक के छात्र/छात्राओं को एक अन्य विषय के साथ पूरक की पात्रता होगी। पर्यावरण विज्ञान के सैद्धांतिक एवं फील्ड वर्क के संयुक्त रूप से 33: (तीस प्रतिशत) अंक उत्तीर्ण होने के लिए अनिवार्य होंगे।

स्नातक स्तर भाग—एक के समस्त नियमित/भूतपूर्व/अमहाविद्यालयीन छात्र/छात्राओं को अपना फील्ड वर्क सैद्धांतिक परीक्षा की समाप्ति के पश्चात् 10 (दस) दिनों के भीतर संबंधित महाविद्यालय/परीक्षा केन्द्र में जमा करेंगे एवं महाविद्यालय के प्राचार्य/केन्द्र अधीक्षक, परीक्षकों की नियुक्ति के लिए अधिकृत रहेंगे तथा फील्ड वर्क जमा होने के सात दिनों के भीतर प्राप्त अंक विश्वविद्यालय को भेजेंगे।

UNIT-I THE MULTI DISCIPLINARY NATURE OF ENVIRONMENTAL STUDIES

Definition, Scope and

Importance Natural Resources:

Renewable and Nonrenewable Resources

- (a) Forest resources: Use and over-exploitation, deforestation, Timber extraction, mining, dams and their effects on forests and tribal people and relevant forest Act.
- (b) Water resources: Use and over-utilization of surface and ground water, floods drought, conflicts over water, dams benefits and problems and relevant Act.
- (c) Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources.
- (d) Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity.
- (e) Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources.
- (f) Land resources: Land as a resource, land degradation, man induced landslides soil erosion and desertification.

(12 Lecture)

UNIT-II ECOSYSTEM

(a) Concept, Structure and Function of and ecosystem

- Producers, consumers and decomposers.
- Energy flow in the ecosystem
- Ecological succession
- Food chains, food webs and ecological pyramids.
- Introduction, Types, Characteristics Features, Structure and Function of Forest, Grass, Desert and Aquatic Ecosystem.

(b) Biodiversity and its Conservation

- Introduction - Definition: genetic, species and ecosystem diversity
- Bio-geographical classification of India.
- Value of biodiversity: Consumptive use, Productive use, social ethics, aesthetic and option values.
- Biodiversity at global, National and local levels.
- India as mega-diversity nation.

- Hot spots of biodiversity.
- Threats to biodiversity: habitat loss, poaching of wildlife, man-wild life conflict.
- Endangered and endemic species of India.
- Conservation of biodiversity: In situ and Ex-situ conservation of biodiversity.

(12Lecture)

UNIT- III

(a) Causes, effect and control measures of

- Air water, soil, marine, noise, nuclear pollution and Human population.
- Solid waste management: Causes, effects and control measures of urban and industrial wastes.
- Role of an individual in prevention of pollution.
- Disaster Management: floods, earthquake, cyclone and landslides.

(12Lecture)

(b) Environmental Management

- From Unsustainable to sustainable development.
- Urban problems related to energy.
- Water conservation, rain water harvesting, water shed management.
- Resettlement and rehabilitation of people, its problems and concerns.
- Environmental ethics: Issues and possible solutions.
- Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust.
- Wasteland reclamation
- Environment protection Act: Issues involved in enforcement of environmental legislation.
- Role of Information Technology in Environment and Human Health.

UNIT- IV

General background and historical perspective- Historical development and concept of Human Rights, Meaning and definition of Human Rights, Kind and Classification of Human Rights.

Protection of Human Rights under the UNO Charter, protection of Human Rights under the Universal Declaration of Human Rights, 1948.

Convention on the Elimination of all forms of Discrimination against women.

Convention on the Rights of the Child, 1989.

UNIT-V

Impact of Human Rights norms in India, Human Rights under the Constitution of India, Fundamental Rights under the Constitution of India, Directive Principles of State policy under the Constitution of India, Enforcement of Human Rights in India.

Protection of Human Rights under the Human Rights Act, 1993- National Human Rights Commission, State Human Rights Commission and Human Rights court in India.

Fundamental Duties under the Constitution of India.

Reference/ Books Recommended

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2. HO Agrawal- International Law and Human Rights
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4. जे.एन. पान्डेय — भारत का संविधान
5. एम.डी. चतुर्वेदी —भारत का संविधान
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24. Survey of the Environment, The Hindu (M)
25. Townsend C. Harper J. And Michael Begon, Essentials of Ecology, Blackwell Science (TB)
26. Trivedi R.K. Handbook of Environment Laws, Rules, Guidelines, Compliances and Standards, Vol I and II, Environment Media (R)
27. Trivedi R.K. and P.K. Goel, Introduction to air pollution, Techno-Science publication (TB)
28. Wanger K.D. 1998, Environmental Management. W.B. Saunders Co. Philadelphia, USA 499p

Part - I
SYLLABUS FOR ENVIRONMENTAL STUDIES AND HUMAN RIGHTS
(Paper code-0828)

MM. 75

इन्वारमेंटल साईंसेस के पाठ्यक्रम को स्नातक स्तर भाग—एक की कक्षाओं में विश्वविद्यालय अनुदान आयोग के निर्देशानुसार अनिवार्य रूप से शिक्षा सत्र 2003—2004 (परीक्षा 2004) से प्रभावशील किया गया है। स्वशासी महाविद्यालयों द्वारा भी अनिवार्य रूप से अंगीकृत किया जाएगा।

भाग 1, 2 एवं 3 में से किसी भी वर्ष में पर्यावरण प्रश्न—पत्र उत्तीर्ण करना अनिवार्य है। तभी उपाधि प्रदाय योग्य होगी।

पाठ्यक्रम 100 अंकों का होगा, जिसमें से 75 अंक सैद्धांतिक प्रश्नों पर होंगे एवं 25 अंक क्षेत्रीय कार्य (Field Work) पर्यावरण पर होंगे।

सैद्धांतिक प्रश्नों पर अंक — 75 (सभी प्रश्न इकाई आधार पर रहेंगे जिसमें विकल्प रहेगा)

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| (अ) लघु प्रश्नोंत्तर | — | 25 अंक |
| (ब) निबंधात्मक | — | 50 अंक |

Field Work — 25 अंकों का मूल्यांकन आंतरिक मूल्यांकन पद्धति से कर विश्वविद्यालय को प्रेषित किया जावेगा। अभिलेखों की प्रायोगिक उत्तर पुस्तिकाओं के समान संबंधित महाविद्यालयों द्वारा सुरक्षित रखेंगे।

उपरोक्त पाठ्यक्रम से संबंधित परीक्षा का आयोजन वार्षिक परीक्षा के साथ किया जाएगा।

पर्यावरण विज्ञान विषय अनिवार्य विषय है, जिसमें अनुत्तीर्ण होने पर स्नातक स्तर भाग—एक के छात्र/छात्राओं को एक अन्य विषय के साथ पूरक की पात्रता होगी। पर्यावरण विज्ञान के सैद्धांतिक एवं फील्ड वर्क के संयुक्त रूप से 33: (तीस प्रतिशत) अंक उत्तीर्ण होने के लिए अनिवार्य होंगे।

स्नातक स्तर भाग—एक के समस्त नियमित/भूतपूर्व/अमहाविद्यालयीन छात्र/छात्राओं को अपना फील्ड वर्क सैद्धांतिक परीक्षा की समाप्ति के पश्चात् 10 (दस) दिनों के भीतर संबंधित महाविद्यालय/परीक्षा केन्द्र में जमा करेंगे एवं महाविद्यालय के प्राचार्य/केन्द्र अधीक्षक, परीक्षकों की नियुक्ति के लिए अधिकृत रहेंगे तथा फील्ड वर्क जमा होने के सात दिनों के भीतर प्राप्त अंक विश्वविद्यालय को भेजेंगे।

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(12 Lecture)

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- India as mega-diversity nation.

- Hot spots of biodiversity.
- Threats to biodiversity: habitat loss, poaching of wildlife, man-wild life conflict.
- Endangered and endemic species of India.
- Conservation of biodiversity: In situ and Ex-situ conservation of biodiversity.

(12 Lecture)

UNIT- III

(a) Causes, effect and control measures of

- Air water, soil, marine, noise, nuclear pollution and Human population.
- Solid waste management: Causes, effects and control measures of urban and industrial wastes.
- Role of an individual in prevention of pollution.
- Disaster Management: floods, earthquake, cyclone and landslides.

(12 Lecture)

(b) Environmental Management

- From Unsustainable to sustainable development.
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- Water conservation, rain water harvesting, watershed management.
- Resettlement and rehabilitation of people, its problems and concerns.
- Environmental ethics: Issues and possible solutions.
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- Wasteland reclamation
- Environment protection Act: Issues involved in enforcement of environmental legislation.
- Role of Information Technology in Environment and Human Health.

UNIT- IV

General background and historical perspective- Historical development and concept of Human Rights, Meaning and definition of Human Rights, Kind and Classification of Human Rights. Protection of Human Rights under the UNO Charter, protection of Human Rights under the Universal Declaration of Human Rights, 1948. Convention on the Elimination of all forms of Discrimination against women. Convention on the Rights of the Child, 1989.

UNIT- V

Impact of Human Rights norms in India, Human Rights under the Constitution of India, Fundamental Rights under the Constitution of India, Directive Principles of State policy under the Constitution of India, Enforcement of Human Rights in India. Protection of Human Rights under the Human Rights Act, 1993- National Human Rights Commission, State Human Rights Commission and Human Rights court in India. Fundamental Duties under the Constitution of India.

Reference/ Books Recommended

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5. एम.डी. चतुर्वेदी –भारत का संविधान
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बी.ए./ बी.एस-सी./ बी.कॉम./ बी.एच.एस.सी. भाग -एक

(आधार पाठ्यक्रम)

प्रथम प्रश्नपत्र

हिंदी भाषा

कोड....

पूर्णांक 75

क्रेडिट 05

पाठ्यक्रमका उद्देश्य:-

- 1.हिंदी भाषाके प्रयोजनात्मक स्वरूप का सामान्य ज्ञान प्रदान करना।
- 2.कंप्यूटर में हिंदी भाषा के प्रयोग की आवश्यकता के अनुरूप कंप्यूटर की कार्य प्रणाली की आरंभिक जानकारी से अवगत होने के लिए प्रेरित करना।
- 3.हिंदी व्याकरण की बुनियादी ज्ञान संप्रेषण कौशल तथा भाषायी दक्षता से अवगत कराना।
- 4.साहित्य और समाज को समझने की दिशा में रुझान उत्पन्न करना।

पाठ्य विषय:-

इकाई 1. (क) पल्लवन, पत्राचार, अनुवाद (ख) एक टोकरी भर मिट्टी : माधवराव सप्रे बड़े भाई साहब : प्रेमचंद	अंक 15 18 कालखंड
इकाई 2. (क) संक्षेपण, हिंदी में संक्षिप्तिकरण, हिंदी-अपठित गद्यांश, पारिभाषिक शब्दावली, हिंदी में पदनाम, मुहावरे एवंलोकोक्तियाँ (ख) जागो फिर एक बार: सूर्यकांत त्रिपाठी 'निराला' जन्मदिन ('मिट्टी से कर्तूंगाधन्यवाद' संग्रह से):एकांत श्रीवास्तव	अंक 15 18 कालखंड
इकाई 3. (क) शब्द-शुद्धि, वाक्य-शुद्धि, शब्द-ज्ञान- पर्यायवाची शब्द, विलोम शब्द, अनेकार्थी-शब्द, समश्रुत शब्द, अनेक शब्दों के लिए एक शब्द (ख) भोलाराम का जीव : हरिशंकर परसाई जीप पर सवार इल्लियां: शरद जोशी	अंक 15 18 कालखंड
इकाई 4.(क) मानक भाषा का अर्थ, मानक हिंदी भाषाका अर्थ, स्वरूप,	अंक 15

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विशेषताएँ, मानक, उपमानक, अमानक-भाषा (ख)शिकागो से स्वामी विवेकानंद का पत्र सत्य और अहिंसा : महात्मा गांधी	18 कालखंड
इकाई 5. (क) देवनागरी लिपि- नामकरण, स्वरूप, विशेषताएँ, कंप्यूटर का सामान्य परिचय, कंप्यूटर में हिंदी का अनुप्रयोग। (ख)कछुआ-धरम : चन्द्रधर शर्मा गुलेरी छत्तीसगढ़ का वैभव: हीरालाल शुक्ल	अंक 15 18 कालखंड

मूल्यांकन योजना:-

प्रत्येक इकाई से एक-एक प्रश्न पूछे जाएंगे। एक प्रश्न के 15 अंक होंगे। प्रत्येक प्रश्न में आंतरिक विकल्प होगा। प्रत्येक प्रश्न के दो भाग 'क' और 'ख' होंगे एवं अंक क्रमशः 08 एवं 07 होंगे। प्रश्नपत्र का पूर्णांक 75 निर्धारित है।

प्रश्नपत्रकेपूर्णांककादसप्रतिशतअंकआंतरिकमूल्यांकनकेलिएनिर्धारितहै।

पाठ्यक्रम अधिगम परिणाम:-

इस पाठ्यक्रम को पूर्ण करने के पश्चात विद्यार्थी:-

- 1.हिंदी प्रयोजनात्मक तथा कार्यशील भाषा के प्रति सजग होंगे।
- 2.भाषा संबंधी संभावित अशुद्धियाँ एवं उनके परिष्कारसे परिचित होंगे तथा मानक भाषा का व्यवहार करने में सक्षम होंगे।
- 3.विद्यार्थियों के शब्द भंडार में वृद्धि होगी।
- 4.हिंदी साहित्य के पठन-पाठन के प्रति रुचि जागृत होगी एवं सामाजिक महत्व के विविध आयामों को समझने की दृष्टि विकसित होगी।

पाठ्यक्रम निर्माण का औचित्य:-

2/2
23.2.23
23/2/23
23.2.2023

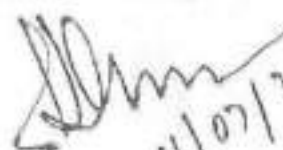
23/2/23

BA/B.Sc./B.Com/B.Sc. Home.Sc. (Part-I)
Foundation Course Paper-II English Language

Max. Marks:75
 Total credits: 05

Qualifying Marks:26

Paper-II	Mark's	Period's	Credit
Unit-I Flamingo : A Textbook for college students Publication : Macmillan Publishers	3x5=15	18	01
Unit -II <ul style="list-style-type: none"> • Writing Skill • Describing a place or a person. • Writing a Biographical Sketch • Narrating an event or experience 	1x10=10	18	01
Unit -III Reading Comprehension <ul style="list-style-type: none"> • (a) Unseen Passage (Normal) • (b) Vocabulary (Text-based) 	1x5=05 1x10=10	18	01
Unit -IV Letter Writing (a) Formal Letters (Business Letters/ Application/Press/ Official Letters) (b) Informal Letters (Relatives and friends)	1x5=5 1x5=5	09	0.5
Unit-V Grammar <ul style="list-style-type: none"> • Articles • Gerunds /Participles • Subject Verb Agreement • Use of Conjunctions • Tenses • Relatives • Possessives & self forms • Grammatical items given in Textbook 'Flamingo' 	1x25=25	27	1.5
Total	75	90	05
Recommended Books- 1. Essential English Grammar, 2nd Edition by Raymond Murphy, Cambridge Publication 2. English Grammar in use 5th edition by Raymond Murphy, Cambridge Publication. 3. Advanced English Grammar by Martine Hewings Cambridge University Press.			


 11/07/2023
 (P. C. Choudhury)

Part A: Introduction			
Program: Certificate Course		Class: B.Se. I Year	Year: 2022 Session: 2022-23
1.	Course Code	CHEM-IT	
2.	Course Title	Inorganic and Physical Chemistry	
3.	Course Type	Theory	
4.	Pre-requisite (if any)	To Study this course our students must have had the subject chemistry in class +2 or equivalent	
5.	Course Learning Outcomes (CLO)	At the end of this course, the students will be able to learn the following aspects of Chemistry <ul style="list-style-type: none"> • To learn basic concept of atomic structure and the periodic properties of elements • To understand chemical bonding in ionic and covalent compounds • To study group trends for <i>s</i> and <i>p</i>-block elements in the periodic table • learn properties and bonding of compounds of the noble gases • Understand the metallurgical extraction of metals. • Basic concepts of Mathematics and Computer for Chemists. • Basics and mechanism of chemical kinetics and catalysis. 	
6.	Credit Value	Theory: 4	
7.	Total Marks	Max. Marks: 50	Min. Passing Marks: 17

Part B: Content of the Course		
Total No. of Lecturers: 90		
Unit	Topics	No. of Lectures
I	<p>Atomic structure : Bohr's theory and its limitation, General idea of de-Broglie matter-waves, Heisenberg uncertainty principle, Schrödinger wave equation, significance of Ψ and Ψ^2, radial & angular wave functions and probability distribution curves, quantum numbers, Atomicorbital and shapes of <i>s</i>, <i>p</i>, <i>d</i> orbitals, Aufbau and Pauli exclusion principles, Hund's Multiplicity rule, electronic configuration of the elements.</p> <p>Periodic properties: Detailed discussion of the following periodic properties of the elements, with reference to <i>s</i>- and <i>p</i>- block. Trends in periodic table and applications in predicting and explaining the chemical behavior.</p> <p>a. Atomic and ionic radii, b. Ionization enthalpy, c. Electron gain enthalpy, d. Electronegativity, Pauling's, Mulliken's, Allred Rochow's scales. Effective nuclear charge, shielding or screening effect, Slater rules, variation of effective nuclear charge in periodic table.</p>	15
II	<p>Chemical bonding- I: Ionic bond: Ionic Solids - Ionic structures, radius ratio & co-ordination number, limitation of radius ratio rule, lattice defects, semiconductors, lattice energy Bom-Haber cycle, Solvation energy and solubility of ionic solids, polarizing power & polarizability of ions, Fajan's rule, Ionic character in covalent compounds; Bond moment and dipole</p>	15

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	moment, Percentage ionic character from dipole moment and electronegativity difference. Metallic bond-free electron and band theories.	
III	Chemical bonding-II: Covalent bond: Valence bond theory and its limitations, Concept of hybridization, equivalent and non-equivalent hybrid orbitals. Valence shell electron pair repulsion theory (VSEPR), shapes of the following simple molecules and ions containing lone pairs and bond pairs of electrons: H ₂ O, NH ₃ , PCl ₃ , H ₃ O ⁺ , SF ₄ , ClF ₃ , ICl ₂ ⁻ , XeF ₂ , XeF ₄ , XeF ₆ , XeOF ₂ , XeOF ₄ , Molecular orbital theory, Bond order and bond strength, Molecular orbital diagrams of diatomic and simple heteroatomic molecules N ₂ , O ₂ , F ₂ , CO, NO.	15
IV	Chemistry of s- & p- block elements: General concepts on group relationships and gradation properties, Comparative study, salient features of hydrides, solvation & complexation tendencies, General concepts on group relationships and gradation properties. Halides, hydrides, oxides and oxyacids of Boron, Aluminum, Nitrogen and Phosphorus. Boranes, borazines, fullerenes, graphene and silicates, interhalogens and pseudohalogens. Chemical properties of the noble gases. Metallurgical extraction of Fe, Al and Cu : Principle of extraction of metal, The occurrence, extraction & isolation of Fe, Al, and Cu	15
V	Mathematical concepts for chemist: Basic Mathematical Concepts: Logarithmic relations, curve sketching, linear graphs, Properties of straight line, slope and intercept, Functions, Differentiation of functions, maxima and minima; integrals; ordinary differential equations; vectors and matrices; determinants; Permutation and combination and probability theory, Significant figures and their applications. Computer for chemists: Introduction to computer, introduction to operating systems like DOS, Windows, Linux Use of computer programs: Running up standard programs & packages such as MS –Word, MS- Excel, Power Point, Execution of linear regression x-y plot, use of software for drawing structures and molecular formulae	15
VI	Chemical kinetics : Rate of reaction, Factors influencing rate of reaction, rate law, rate constant, Order and molecularity of reactions, rate determining step, Zero, First and Second order reactions, Rate and Rate Law, methods of determining order of reaction, Chain reactions. Temperature dependence of reaction rate, Arrhenius theory, Physical significance of Activation energy, collision theory, demerits of collision theory, non-mathematical concept of transition state theory. Catalysis: Homogeneous and Heterogeneous Catalysis, types of catalyst, characteristics of catalyst, Enzyme catalyzed reactions, Micellar catalyzed reactions, Industrial applications of catalysis.	15
Keywords: Atomic structure, Periodic properties, ionic bonding, covalent bonding, diagonal relationship, metallurgy, computer, memory, chemical kinetics, catalysis		

Part C : Learning Resources

Text Books, Reference Books, Other Resources

Suggested Readings :

1. Lee, J. D. Concise Inorganic Chemistry, Wiley, 5th Edition, 2008.
2. Douglas, B.; McDaniel, D. and Alexander J. Concepts & Models of Inorganic Chemistry, Wiley, 3rd Edition, 2006
3. Atkins, P.W. & Paula, J. Physical Chemistry, 10th Ed., Oxford University Press, 2014.
4. Puri, B. R., Sharma, L. R. and Kalia, K. C., Principles of Inorganic Chemistry, Milestone Publishers/ Vishal Publishing Co.; 33rd Edition 2016
5. Madan, R. D. Modern Inorganic Chemistry, S Chand Publishing, 1987.

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7. Rodger, G.E. Inorganic and Solid State Chemistry, Cengage Learning India Edition, 2002.
8. Pfennig, B. W. Principles of Inorganic Chemistry, Wiley, 2015.
9. Housecroft, C. E. and Sharpe, A. G. Inorganic Chemistry, Pearson, 4th Edition, 2012
10. Rajaramana, V., Computers for beginners, PHI Learning Private Publishers, New Delhi, 2021
11. Tebbutt, P., Basic mathematics for Chemists, 11nd Edn. ELBS, 1999
12. Khera, H.C., Gurtu, J.N., Singh, J., Chemistry for B.Sc. Ist Year, Pragati Prakashan
13. Bariyar, A. & Goyal, S., B.Sc. Chemistry Combined (in Hindi), Krishna Educational Publishers Year 2019
14. Puri, B.R., Patharia, M.S., Sharama, L.R., Principles of Physical Chemistry, Vishal Publishing Company 2020
15. Gurtu, J.N., Gurtu, A., Advanced Physical Chemistry, Pragati Prakashan, Meerut, Edition IV, 2017
16. Atkins' Physical Chemistry, 10th Edition, Oxford University Press, 2014
17. Barrow, G.M., Physical Chemistry Tata McGraw-Hill, 2007
18. Ball, D.W., Physical Chemistry, Thomson Press, India, 2007
19. Castellan, G.W., Physical Chemistry, 4th Edition, Narosa, 2004
20. Mortimer, R.G., Physical Chemistry, 3rd Edition, Elsevier, Noida, UP, 2009
21. Levine, I.N., Physical Chemistry, 6th Edition, Tata McGraw-Hill, 2010
22. Metz, C.R., 2000 Solved Problems in Chemistry, Sahaun Series, 2006
23. Engel, T. and Reid, P., Physical Chemistry, 3rd Edition, Prentice Hall, 2012
24. Negi, A.S. & Anand, S.C., A Text Book of Physical Chemistry, 3rd Edition, New Age International Publication
25. Bajpai, D.N., Advanced Physical Chemistry, S. Chand, 2019
26. Bahal & Tuli, Essential of Physical Chemistry, 2020

E- Learning Resources:

1. <http://hecccontent.upsdc.gov.in/Home.aspx>
2. <https://nptel.ac.in/courses/104/106/104106096/>
3. <http://hecccontent.upsdc.gov.in/Home.aspx>
4. <https://nptel.ac.in/courses/104/106/104106096/>
5. <https://www2.chemistry.msu.edu/faculty/reusch/VirtTxtJml/intro1.htm>
6. <https://nptel.ac.in/courses/104/103/104103071/#>

Fundamental Chemistry related topics on SWAYAM platform and E-pathshala

Part D: Assessment and Evaluation

Maximum Marks: 50

DECLARATION

This is to certify that the syllabus is framed by the Central Board of Studies (Chemistry) as per the guidelines (TOR) of the Department of Higher Education, Raipur Chhattisgarh.





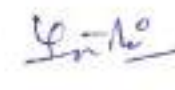
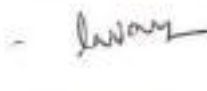


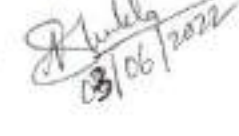
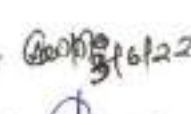

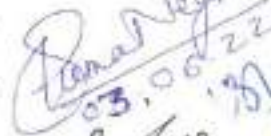
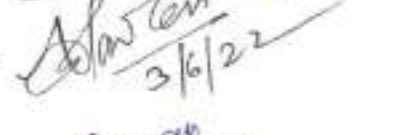
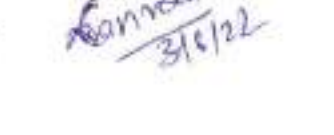

1. Dr. Alka Shrivastav,
Assistant Professor,
Govt. E.V.P.G. College, Korba

- Chairman

2. Smt. Priyanka Tiwari,
Assistant Professor,
Govt. J.P. Verma P.G. College, Bilaspur (C.G.)

- Member

Alka
3.12.22
Priyanka

- | | | | |
|-----|---|----------|---|
| 3. | Mr. Vijay Kumar Lahare,
Assistant Professor,
Govt. Lahiri P.G. College Chirimiri(C.G.) | - Member |  |
| 4. | Dr. Rajmani Patel,
Assistant Professor,
Hemchand Yadav University, Durg (C.G.) | - Member |  |
| 5. | Dr. A.K. Singh,
Professor,
Govt. V.Y.T. P.G. College Durg (C.G.) | - Member |  |
| 6. | Dr. P.K. Singh,
Assistant Professor,
Govt. T.C.L. P.G. College Janjgir(C.G.) | - Member |  |
| 7. | Dr. P.K. Agnihotri,
Professor,
Govt. Yuganandam Chhattisgarh College Raipur(C.G.) | - Member |  |
| 8. | Dr. B.D. Diwan,
Professor,
Govt. M.M.R. P.G. College Champa(C.G.) | - Member |  |
| 9. | Dr. Sandhya Patre,
Assistant Professor,
Sant Shiromani Guru Ravidas Govt. College Sargaon,
Mungeli(C.G.) | - Member |  |
| 10. | Mrs. Mousami Lahare,
Assistant Professor,
Govt. G.N.A. P.G. College Bhatapara, (C.G.) | - Member |  |
| 11. | Dr. Alka Shukla,
Assistant Professor,
Mohan Lal Jain(Mohan Bhaiya) Govt. College Khursipar,
Bhilai(C.G.) | - Member |  |
| 12. | Dr. Arti Gupta,
Professor, Govt. Dr. W.W.P. Girl's P.G. College Durg (C.G.) | - Member |  |
| 13. | Dr. Deepti Tikariha,
Assistant Professor, APSGMNS Govt. P.G. College
Kawardha(C.G.) | - Member |  |
| 14. | Dr. Seema Negi,
Assistant Professor, Govt. J.M.P. College, Takhatpur (C.G.) | - Member |  |
| 15. | Dr. Vikesh Kumar Jha,
Assistant Professor, Govt. R.R.M. P.G. College Surajpur
(C.G.) | - Member |  |
| 16. | Dr. Ashish Tiwari,
Assistant Professor,
Dr. Bhimrao Ambedkar Govt. College Pamgarh(C.G.) | - Member |  |
| 17. | Mr. Laxmi Chand Manwani,
Assistant Professor,
Government Vivekand PG College Manendragarh(C.G.) | - Member |  |

Part A: Introduction			
Program: Certificate Course		Class: B.Sc. I Year	Year: 2022
		Session: 2022-23	
1.	Course Code	CHEM-2T	
2.	Course Title	Organic and Physical Chemistry	
3.	Course Type	Theory	
4.	Pre-requisite (if any)	To Study this course our students must have had the subject chemistry in class +2 or equivalent	
5.	Course Learning Outcomes (CLO)	<p>At the end of this course, the students will be able to learn the following aspects of Chemistry</p> <ul style="list-style-type: none"> • Understand the fundamentals of physical organic chemistry • Stereochemistry of carbon compounds • Chemistry of Alkenes and Alkynes • Chemistry of Alicyclic and aromatic Hydrocarbons • Understanding kinetic model of gases and its properties, Behavior of real gases, its derivation from ideal behavior, equation of state, isotherms and Law of corresponding states and molecular velocities. • Fundamental concepts of liquid state and colloids & surface chemistry. • Solids, Lattice parameters – its calculation, application of symmetry, solid characteristics of simple salts. 	
6.	Credit Value	Theory: 4	
7.	Total Marks	Max. Marks: 50	Min. Passing Marks: 17

Part B: Content of the Course		
Total No. of Lecturers: 90		
Unit	Topics	No. of Lectures
I	Basics of organic chemistry: Influence of hybridization on bond properties (as applicable to ethane, ethene, and ethyne). Application of inductive effect (a) Basicity of amines (b) Acidity of carboxylic acids (c) Stability of carbocations. Resonance or Mesomeric effect, application to (a) acidity of phenol, and (b) acidity of carboxylic acids. Hyper conjugation and its application to stability of carbocations, Free radicals and alkenes. Reactive intermediates: carbanions, carbenes, Nitrene, Basic concept of S_N1 , S_N2 , E1, E2, E1cb reactions and Neighboring group Participation (NGP). Electrophiles and Nucleophiles; Nucleophilicity and basicity.	15
II	Introduction to stereochemistry: Optical Isomerism: Optical Activity, Specific Rotation, Chirality/Asymmetry, Enantiomers, Molecules with two or more chiral-centres, Diastereoisomers, meso compounds, Relative and absolute configuration: Fischer, Newman and Sawhorse Projection formulae and their interconversions; Erythrose and threose, D/L, d/l system of nomenclature, Cahn-Ingold-Prelog system of nomenclature (C.I.P rules),	15

Ans
2/6

	R/S nomenclature. Geometrical isomerism: cis-trans, syn-anti and E/Z notations. Stereospecific and stereoselective synthesis. Asymmetric synthesis.	
III	Acyclic hydrocarbons: Alkenes - Preparation of alkenes. Properties: Addition of hydrogen - heat of hydrogenation and stability of alkenes. Addition of halogen and its mechanism. Addition of HX, Markonikov's rule, addition of H ₂ O, (Oxymercuration-reduction and hydroboration -oxidation), HOX, H ₂ SO ₄ with mechanism and addition of HBr in the presence of peroxide (anti - Markonikov's addition). Dienes - Types of dienes, reactions of conjugated dienes - 1,2 and 1,4 addition of HBr to 1,3 - butadiene and Diel's - Alder reaction. Alkynes: Preparation by dehydrohalogenation of dihalides, dehalogenation of tetrahalides. Properties; Acidity of acetylenic hydrogen (formation of Metal acetylides). Preparation of higher acetylenes, Metal ammonia reductions, Physical properties. Chemical reactivity - electrophilic addition of X ₂ , HX, H ₂ O (Tautomerism), Oxidation with KMnO ₄ , OsO ₄ , reduction and Polymerization, reaction of acetylene.	15
IV	Alicyclic hydrocarbons (cycloalkanes): Nomenclature, Preparation by Freunds method, Wislicenus method. Properties - reactivity of cyclopropane and cyclobutane by comparing with alkanes, Stability of cycloalkanes - Baeyer's strain theory, Sachse and Mohr predictions and Pitzer's strain theory. Conformational structures of cyclobutane, cyclopentane, cyclohexane. Conformers: in substituted cyclohexane, decalins. Aromatic hydrocarbons: Aromaticity: Hückel's rule, aromatic character of arenes, cyclic carbocations/ carbanions and heterocyclic compounds with suitable examples. Electrophilic aromatic substitution: halogenation, nitration, sulphonation and Friedel-Craft's alkylation/acylation with their mechanism. Directive effects of the groups.	15
V	Gaseous state chemistry: Kinetic molecular model of a gas: postulates and derivation of the kinetic gas equation; collision frequency; collision diameter; mean free path; Maxwell distribution and its use in evaluating molecular velocities (average, root mean square and most probable) and average kinetic energy, law of equipartition of energy, degrees of freedom and molecular basis of heat capacities. Joule Thomson effect, Liquefaction of Gases. Behavior of real gases: Deviations from ideal gas behavior, compressibility factor (Z), and its variation with pressure and temperature for different gases. Causes of deviation from ideal behavior. Vander Waals equation of state, its derivation and application in explaining real gas behavior, calculation of Boyle temperature. Isotherms of real gases and their comparison with Vander Waals isotherms, continuity of states, critical state, relation between critical constants and Vander Waals constants, law of corresponding states.	15
VI	Liquid state chemistry: Intermolecular forces, magnitude of intermolecular force, structure of liquids, Properties of liquids, viscosity and surface tension. Colloids and surface chemistry: Classification, Optical, Kinetic and Electrical Properties of colloids, Coagulation, Hardy Schulze law, flocculation value, Protection, Gold number, Emulsion, micelles and types, Gel, Syneresis and thixotropy, Application of colloids. Physical adsorption, chemisorption, adsorption isotherms (Langmuir and Freundlich). Qualitative	15

Ans)
3/6

discussion of BET. Solid state chemistry: Nature of the solid state, law of constancy of interfacial angles, law of rational indices, Miller indices, elementary ideas of symmetry, symmetry elements and symmetry operations, seven crystal systems and fourteen Bravais lattices; X-ray diffraction, Bragg's law, a simple account of rotating crystal method and powder pattern method. Crystal defects.	
Keywords: Electronic effect, Reactive intermediates, Stereochemistry, Alkenes, Alkynes, Cycloalkanes, Aromaticity, Gas, Liquid, Colloidal state and Solid	
Part C: Learning Resource	
Text Books, Reference Books, Other Resources	
Suggested Readings :	
<ol style="list-style-type: none"> 1. Morrison, R. N. & Boyd, R. N. Organic Chemistry, Dorling Kindersley (India) Pvt. Ltd.(Pearson Education). 2. Finar, I. L. Organic Chemistry (Volume 1), Dorling Kindersley (India) Pvt. Ltd. (Pearson Education). 3. Finar, I. L. Organic Chemistry (Volume 2: Stereochemistry and the Chemistry of Natural Products), Dorling Kindersley (India) Pvt. Ltd. (Pearson Education). 4. Eliel, E. L. & Wilen, S. H. Stereochemistry of Organic Compounds, Wiley: London, 1994. 5. Kalsi, P. S. Stereochemistry Conformation and Mechanism, New Age International, 2005. 6. McMurry, J.E. Fundamentals of Organic Chemistry, 7th Ed. Cengage Learning India Edition, 2013. 7. Bruice, P. Y. Organic Chemistry. 2nd Edition, Prentice-Hall, International Edition (1998). 8. Atkins' Physical Chemistry, 10th Edition, Oxford University Press, 2014 9. Barrow, G.M., Physical Chemistry Tata McGraw-Hill, 2007 10. Ball, D.W., Physical Chemistry, Thomson Press, India, 2007 11. Castellan, G.W., Physical Chemistry, 4th Edition, Narosa, 2004 12. Mortimer, R.G., Physical Chemistry, 3rd Edition, Elsevier, Noida, UP, 2009 13. Levine, I.N., Physical Chemistry, 6th Edition, Tata McGraw-Hill, 2010 14. Metz, C.R., 2000 Solved Problems in Chemistry, Sahaun Series, 2006 15. Negi, A.S. & Anand, S.C., A Text Book of Physical Chemistry, 3rd Edition, New Age International Publication 16. Bajpai, D.N., Advanced Physical Chemistry, S. Chand, 2019 17. Bahal & Tuli, Essential of Physical Chemistry, 2020 	
E- Learning Resources:	
<ol style="list-style-type: none"> 1. http://heecontent.upsdc.gov.in/Home.aspx 2. https://nptel.ac.in/courses/104/106/104106096/ 3. http://heecontent.upsdc.gov.in/Home.aspx 4. https://nptel.ac.in/courses/104/106/104106096/ 5. https://www2.chemistry.msu.edu/faculty/reusch/VirtTxtJml/intro1.htm 6. https://nptel.ac.in/courses/104/103/104103071// 	
Fundamental Chemistry related topics on SWAYAM platform and E-pathshala	
Part D: Assessment and Evaluation	
Maximum Marks: 50	

DECLARATION

This is to certify that the syllabus is framed by the Central Board of Studies (Chemistry) as per the

Arun
3/6

guidelines (TOR) of the Department of Higher Education, Raipur Chhattisgarh.

1. Dr. Alka Shrivastav,
Assistant Professor,
Govt. E.V.P.G. College, Korba - Chairman *Amal*
3/6/22
2. Smt. Priyanka Tiwari,
Assistant Professor,
Govt. J.P. Verma P.G. College, Bilaspur - Member *Priyanka*
3/6/22
3. Mr. Vijay Kumar Lahare,
Assistant Professor,
Govt. Lahiri P.G. College Chirimiri(C.G.) - Member *Vijay*
4. Dr. Rajmani Patel,
Assistant Professor,
Hemchand Yadav University, Durg - Member *Rajmani*
03.6.22
5. Dr. A.K. Singh,
Professor,
Govt. V.Y.T. P.G. College Durg - Member *A.K.S.*
6. Dr. P.K. Singh,
Assistant Professor,
Govt. T.C.L. P.G. College Janjgir(C.G.) - Member *P.K.S.*
7. DR. P.K. Agnihotri,
Professor,
Govt. Yuganandam Chhattisgarh College Raipur(C.G.) - Member *P.K.A.*
8. Dr. B.D. Diwan,
Professor,
Govt. M.M.R. P.G. College Champa(C.G.) - Member *B.D.*
3/6/22
9. Dr. Sandhya Patre,
Assistant Professor,
Sant Shiromani Guru Ravidas Govt. College Sargaon,
Mungeli(C.G.) - Member *Sandhya*
03/06/2022
10. Mrs. Mousami Lahare,
Assistant Professor,
Govt. G.N.A. P.G. College - Member *Mousami*
03.06.2022
11. Dr. Alka Shukla,
Assistant Professor,
Mohan Lal Jain(Mohan Bhaiya) Govt. College Khursipar,
Bhilai(C.G.) - Member *Alka*
03/06/2022
12. Dr. Arti Gupta,
Professor, Govt. Dr. W.W.P. Girdas P.G. College Durg (C.G.) - Member *Arti*
3/6/22
13. Dr. Deepti Tikariha,
Assistant Professor, APSGMNS Govt. P.G. College
Kawardha(C.G.) - Member *Deepti*
3/6/22
14. Dr. Seema Negi,
Assistant Professor, Govt. J.M.P. College, Takhatpur (C.G.) - Member *Seema Negi*
3/6/22
15. Dr. Vikesh Kumar Jha,
Assistant Professor, Govt. R.R.M. P.G. College Surajpur
(C.G.) - Member *V.K.J.*
16. Dr. Ashish Tiwari,
Assistant Professor,
Dr. Bhimrao Ambedkar Govt. College Pamgarh(C.G.) - Member *Ashish*
3/6/22
17. Mr. Laxmi Chand Manwani,
Assistant Professor,
Government Vivekand PG College Manendragarh(C.G.) - Member *Laxmi*

Part A: Introduction			
Program: Certificate Course		Class: B.Sc. I Year	Year: 2022 Session: 2022-23
1.	Course Code	CHEM-1P	
2.	Course Title	Lab. 1	
3.	Course Type	Practical	
4.	Pre-requisite (if any)	To Study this course our students must have had the subject chemistry in class +2 or equivalent	
5.	Course Learning Outcomes (CLO)	At the end of this course, the students will be able to learn the following aspects of Chemistry <ul style="list-style-type: none"> • To analyse the given mixture for anions (acid radicals) and cations (basic radicals). • Titrations • Qualitative Analysis • Surface tension measurements. • Viscosity measurement • Chemical Kinetics 	
6.	Credit Value	Practical: 2	
7.	Total Marks	Max. Marks: 50	Min Passing Marks: 17

Part B: Content of the Course		
Total No. of Lecturers: 30		
LABATORY COURSE		No. of Lectures
Tentative list of Practical	<p>A. Inorganic chemistry Semi-micro qualitative analysis (using H₂S or other methods) of mixtures - not more than four ionic species (two anions and two cations, excluding interfering, insoluble salts) out of the following: Cations : NH₄⁺, Pb²⁺, Bi³⁺, Cu²⁺, Cd²⁺, Fe²⁺, Al³⁺, Co²⁺, Ni²⁺, Mn²⁺, Zn²⁺, Ba²⁺, Sr²⁺, Ca²⁺, Na⁺ Anions : CO₃²⁻, S²⁻, SO₃²⁻, NO₂⁻, CH₃COO⁻, Cl⁻, Br⁻, I⁻, NO₃⁻, SO₄²⁻ (Spot tests may be carried out wherever feasible)</p> <p>B. Acid-Base Titrations</p> <ul style="list-style-type: none"> • Standardization of sodium hydroxide by oxalic acid solution. • Determination of strength of HCl solution using sodium hydroxide as intermediate. • Estimation of carbonate and hydroxide present together in mixture. • Estimation of carbonate and bicarbonate present together in a mixture. • Estimation of free alkali present in different soaps/detergents 	10

Ans
3/6

	<p>C. Redox Titrations</p> <ul style="list-style-type: none"> • Standardization of KMnO_4 by oxalic acid solution. • Estimation of Fe(II) using standardized KMnO_4 solution. • Estimation of oxalic acid and sodium oxalate in a given mixture. • Estimation of Fe(II) with $\text{K}_2\text{Cr}_2\text{O}_7$ using internal (diphenylamine, anthranilic acid) and external indicator. 	
	<p>Organic chemistry</p> <ol style="list-style-type: none"> 1. Demonstration of laboratory Glassware's and Equipments. 2. Calibration of the thermometer. $80^\circ - 82^\circ$ (Naphthalene), $113.5^\circ - 114^\circ$ (Acetanilide), $132.5^\circ - 133^\circ$ (Urea), 100° (Distilled Water.) 3. Purification of organic compounds by crystallization using different solvents. Phthalic acid from hot water (using fluted filter paper and stemless funnel). Acetanilide from boiling water. Naphthalene from ethanol. Benzoic acid from water. 4. Determination of the melting points of organic compounds. Naphthalene $80^\circ - 82^\circ$, Benzoic acid $121.5^\circ - 122^\circ$, Urea $132.5^\circ - 133^\circ$ Succinic acid $184.5^\circ - 185^\circ$, Cinnamic acid $132.5^\circ - 133^\circ$, Salicylic acid $157.5^\circ - 158^\circ$, Acetanilide $113.5^\circ - 114^\circ$, m-Dinitrobenzene 90°, p-Dichlorobenzene 52°, Aspirin 135°. 5. Effect of impurities on the melting point – mixed melting point of two unknown organic compounds. Urea–Cinnamic acid mixture of various compositions (1:4, 1:1, 4:1). 6. Determination of boiling point of liquid compounds. (boiling point lower than and more than 100°C by distillation and capillary method). Ethanol 78°, Cyclohexane 81.4°, Toluene 110.6°, Benzene 80°. i. Distillation (Demonstration) Simple distillation of ethanol-water mixture using water condenser. Distillation of nitrobenzene and aniline using air condenser. ii. Sublimation Camphor, Naphthalene, Phthalic acid and Succinic acid. iii. Decolorisation and crystallization using charcoal. Decolorisation of brown sugar with animal charcoal using gravity filtrations crystallization and decolorisation of impure naphthalene (100 g of naphthalene mixed with 0.3 g of Congo red using 1 g of decolorizing carbon) from ethanol. 7. Qualitative Analysis Detection of elements (N, S and halogens) and functional groups (Phenolic, Carboxylic, Carbonyl, Esters, Carbohydrates, Amines, Amides, Nitro and Anilide) in simple organic compounds. 8. Preparation and characterization of biodiesel from vegetable oil. 9. Preparation of soap. 	10
	<p>Physical chemistry</p> <ol style="list-style-type: none"> 1. Surface tension measurements. Determine the surface tension by (i) drop number (ii) drop weight method. • Surface tension composition curve for a binary liquid mixture. 2. Viscosity measurement using Ostwald's viscometer. Determination of viscosity of aqueous solutions of (i) sugar (ii) ethanol at room temperature. Study of the variation of viscosity of sucrose solution with the concentration of solute. Viscosity Composition curve for a binary liquid mixture. 	10

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5/6

	<p>3. Chemical Kinetics To determine the specific rate of hydrolysis of methyl/ethyl acetate catalysed by hydrogen ions at room temperature. To study the effect of acid strength on the hydrolysis of an ester. To compare the strengths of HCl & H₂SO₄ by studying the kinetics of hydrolysis of ethyl acetate.</p> <p>4. Colloids To prepare colloidal solution of silver nanoparticles (reduction method) and other metal nanoparticles using capping agents.</p>	
<p>Keywords: Semi-micro qualitative analysis, Qualitative analysis, Titrations, Chemical Kinetics, Colloids, Viscosity, Surface tension, Decolorization and crystallization, Distillation, Sublimation, Soap, biodiesel.</p>		

Part C: Learning Resource	
Text Books, Reference Books, Other Resources	
<p>Suggested Readings :</p> <ol style="list-style-type: none"> 1. Mendham, J., A. I. Vogel's Quantitative Chemical Analysis 6th Ed., Pearson, 2009. 2. Ahluwalia, V. K., Dhingra, S. and Gulati, A. College practical Chemistry, University Press. 3. Mann, F.G. & Saunders, B.C. Practical Organic Chemistry, Pearson Education (2009). 4. Furniss, B.S.; Hannaford, A.J.; Smith, P.W.G.; Tatchell, A.R. Practical Organic Chemistry, 5th Ed., Pearson (2012) 5. Khosla, B. D.; Garg, V. C. & Gulati, A. Senior Practical Physical Chemistry, R. Chand & Co.: New Delhi (2011). 6. Garland, C. W.; Nibler, J. W. & Shoemaker, D. P. Experiments in Physical Chemistry 8th Ed.; McGraw-Hill: New York (2003). 7. Halpern, A. M. & McBane, G. C. Experimental Physical Chemistry 3rd Ed.; W.H. Freeman & Co.: New York (2003). <p>Sidhwani, I.T., Saini, G., Chowdhury, S., Garg, D., Malovika, Garg, N. Wealth from waste: 8.A green method to produce biodiesel from waste cooking oil and generation of useful products from waste further generated "A Social Awareness Project", Delhi University Journal of Undergraduate Research and Innovation.</p> <p>9. Carpenter, William Lant; Leask, Henry (1895). A treatise on the manufacture of soap and candles, lubricants and glycerin. Free ebook at Google Books.</p> <p>E- Learning Resources:</p> <ol style="list-style-type: none"> 1. http://hecontent.upsdc.gov.in/Home.aspx 2. https://nptel.ac.in/courses/104/106/104106096/ 3. http://hecontent.upsdc.gov.in/Home.aspx 4. https://nptel.ac.in/courses/104/106/104106096/ 5. https://www2.chemistry.msu.edu/faculty/reusch/VirtTxtJml/intro1.htm 6. https://nptel.ac.in/courses/104/103/104103071/# <p>Fundamental Chemistry related topics on SWAYAM platform and E-pathshala</p>	
Part D: Assessment and Evaluation	
Maximum Marks: 50	

Ans
2/6

PRACTICAL EXAMINATION B. Sc. – I	05 Hrs. M.M. 50
Three experiments are to be performed	
1. Inorganic Mixture Analysis, four radicals two basic & two acid (excluding insoluble, Interfering & combination of acid radicals) OR Two Titrations (Acid Bases, Redox and Iodo/Iodometry/Complexometric titration)	12 marks
2. Detection of functional group in the given organic compound and determine its MPt/BPt. OR Crystallization of any one compound as given in the prospectus along with the determination of mixed MPt. OR Decolorisation of brown sugar along with sublimation of camphor/ Naphthlene.	8 marks 14 marks
3. Any one physical experiment that can be completed in two hours including calculations.	10 marks
4. Viva	06 marks
5. Sessionals	
In case of Ex-Students two marks will be added to each of the experiments	

DECLARATION

This is to certify that the syllabus is framed by the Central Board of Studies (Chemistry) as per the guidelines (TOR) of the Department of Higher Education, Raipur Chhattisgarh.

- | | |
|---|--|
| 1. Dr. Alka Shrivastav,
Assistant Professor,
Govt. E.V.P.G. College, Korba | - Chairman  |
| 2. Smt. Priyanka Tiwari,
Assistant Professor,
Govt. J.P. Verma P.G. College, Bilaspur | - Member  |
| 3. Mr. Vijay Kumar Lahare,
Assistant Professor,
Govt. Lahiri P.G. College Chirimiri(C.G.) | - Member  |
| 4. Dr. Rajmani Patel,
Assistant Professor,
Hemchand Yadav University, Durg | - Member  |
| 5. Dr. A.K. Singh,
Professor,
Govt. V.Y.T. P.G. College Durg | - Member  |
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Professor,
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| 8. Dr. B.D. Diwan, | - Member  |

- Professor,
Govt. M.M.R. P.G. College Champa(C.G.)
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- Member Pali
03/06/2022

- Member Sofiane
03.06.2022

- Member Shukla
3/6/2022

- Member Sharma
3/6/22

- Member Sharma
03/6/22

- Member Seema Negi
3/6/22

- Member

- Member Sharma
3/6/22

- Member

Sharma

Part A: Introduction			
Program: Certificate Course		Class: B.Sc. I st Year	Year: 2022 Session: 2022-2023
1	Course Code	ZOOL-1T	
2	Course Title	Animal Diversity: Non-Chordata and Chordata, Comparative Anatomy and Physiology of Non-chordates	
3	Course Type	Theory	
4	Pre-requisite (if any)	No	
5	Course Learning Outcomes (CLO)	Upon completion of the course students should be able to : <ul style="list-style-type: none"> • Learn about the importance of systemic, taxonomy and phylogeny to get a concrete idea of evolution of non-chordate phyla. • Understand the various morphological, anatomical structures and functions of animals of different phyla. • Get the knowledge about economic, ecological and medical significance of various animals in human welfare. • Understand the important parasites and their control measures. • Comparison of the anatomy and physiology of the different taxa of non-chordates. 	
6	Credit Value	4	
7	Total Marks	Max. Marks: 50	Min Passing Marks : 17

Part B: Content of the Course		
Total Lectures: 60		
Unit	Topics	No. of Lectures
I	Taxonomy, Protozoa, Porifera Taxonomy- Elementary knowledge of Zoological Nomenclature and International Code. Classification of Animal Kingdom upto Phylum of acoelomate and coelomate non-chordates according to Parker and Haswell 7 th edition. Protozoa- Phylum Protozoa: General characters of the phylum and classification up to order with characters and suitable examples. Structure, life history and pathogenicity of malaria parasite (<i>Plasmodium vivax</i>). Protozoa and disease. Porifera- Phylum Porifera: General characters of the phylum and classification up to order with characters and suitable examples. Type study of Sycon.	12
II	Coelenterata, Platyhelminthes, Nematelminthes : Coelenterata- Phylum Coelenterata: General characters of the phylum and classification up to order with characters and suitable examples. Type Study of Obelia. Platyhelminthes - Phylum Platyhelminthes: General characters of the phylum and classification up to order with characters and suitable examples. Type Study of Liverfluke. Nematelminthes- Phylum Nematelminthes: General characters of the phylum and classification up to order with characters and suitable examples. Pathogenic nematodes and diseases.	12
III	Annelida, Arthropoda, Mollusca : Annelida- Phylum Annelida: General Characters of the phylum and classification up to order with characters and suitable examples. Types study of Earthworm (<i>Pheretima</i>). Arthropoda - Phylum Arthropoda: General Characters of the phylum and classification up to order with characters and suitable examples. Type study of Prawn. Insects as a vector of human disease. Mollusca - Phylum Mollusca: General characters of the phylum and classification up to order with characters and suitable examples. Type study of <i>Pila</i> .	12


 A.K.R. Jahn
 31.5.2022

IV	<p>Echinodermata, Hemichordata, Classification of Chordata :</p> <p>Echinodermata - Phylum Echinodermata: General characters of the phylum and classification up to order with characters and suitable examples. Type study of Starfish (<i>Asterias</i>).</p> <p>Hemichordata - Phylum Hemichordata: General characters of the phylum hemichordate and relationship with non-chordates and chordates. Type study of <i>Balanoglossus</i>.</p> <p>Classification of Chordata - Classification of Chordata up to order with characters and suitable examples. Brief account of Urochordata, Cephalochordata and Vertebrata.</p>	11
V	<p>Comparative Anatomy and Physiology of Non-chordates: Coelom and coelomducts in Non- chordate. Locomotory organs and locomotion in Non- chordate. Pattern of feeding and digestion in lower Metazoans. Comparative anatomy and physiology of respiration and excretion in Non- chordate. Primitive, diffused and advance nervous system in Non- chordate. Reproduction in Non-chordates.</p>	13
<p>Keywords : Locomotory organ, feeding and digestion, respiration, International Commission on Zoological Nomenclature (ICZN), Classification, Protozoa, Classification, Liver Fluke, Trochophore, Arthropoda, Crustacea larva, Echinodermata larva</p>		

Part C - Learning Resource	
<p>1. Text Books, Reference Books, Other Resources –</p> <ol style="list-style-type: none"> Parker, J, Haswell, WA, "A Text Book of Zoology", VII edition, Vol. I & II, Low Price Publications, Delhi, 1990. Barnes, RD, "Invertebrate Zoology", VII Edition, Cengage Learning, India, 2006. Pechenik, JA, "Biology of the Invertebrates" McGraw-Hill Educations, VII Edition, 2015. Sedgwick, A, "A Students Text Book of Zoology", Vol. I, II & Vol. III., Low Price Publications, Delhi, 1990. Dhami and Dhami, "Invertebrate Zoology" R., Chand & Co., India, 2009. Jordan and Verma, "Invertebrate Zoology," S. Chand & Company, New Delhi, 2013. Agarwal, VK, "Zoology for Degree Students: Non-Chordata", S Chand & Company, 2017. Kotpal, R, "Modern Text Book of Invertebrates", Rastogi Publications, Meerut, 2017. Kotpal, R, "Protozoa to Echinodermata (Phylum Series)", Rastogi Publications, Meerut, 2017. Kardong, K.V. (2006) Vertebrates: Comparative Anatomy, Function, Evolution (4th edition), McGraw-Hill Jordan, E. L. and Verma, P. S. (2013) Chordate Zoology (14th edition). Saxena, R. K. and Saxena, S. (2015) Comparative Anatomy of Vertebrates (2nd edition). 	
<p>E- Resources –</p> <ol style="list-style-type: none"> SWAYAM- https://swayam.gov.in/explorer?searchText= https://academic.oup.com https://medlineplus.gov https://ncin.nih.gov https://zoologylearningpoint.woodpress.com https://zoologyresources.com National digital library – https://ndl.litkeo.ac.in e-PG Pathshala (MHRD) Portal, https://egpg.inflibnet.ac.in Science Direct Open Access Content – https://www.sciencedirect.com/book/9781843342038/ open – Access https://egyankosh.ac.in 	


 Dr. K. R. Datta
 31-5-2022

Part D: Assessment and Evaluation

Maximum Marks, University exam. - :50

DECLARATION

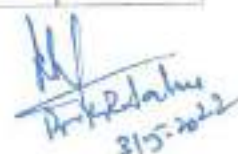
This is to certify that the syllabus is framed by the central board of study (Zoology) as the guidelines of the department of higher education, Chhattisgarh.

1. Dr. K. R. Sehu - Chairman -
Assistant Professor, Govt. Pandit Madhav Rao Sapre Collge, Pendra Road  31.5.2022
2. Dr. Ajit Hundet - Member -
Professor, Govt. D. B. Girls College, Raipur  31.05.2022
3. Dr. Prem Praksah Singh - Member -
Professor, Govt. College, Kusmi  31/05/2022
4. Dr. Shubhada Rahalkar - Member -
Professor, Govt. Bilasa Girls P. G. College, Bilaspur  31.5.22
5. Dr. Anil Kumar Shrivastava - Member -
Professor, Govt. V. Y. T. P. G. Autonomous College, Durg  31.5.22
6. Dr. R. K. Tamboli - Member -
Assistant Professor, Kirodimal Govt. Arts & Science College, Raigarh  31.5.22
7. Dr. Parmita Dubey - Member -
Assistant Professor, Govt. J. Y. Chhattisgarh College, Raipur  31.5.22
8. Dr. Shashi Gupta - Member -
Assistant Professor, Govt. Nagarjuna P. G. College of Science, Raipur  31.5.22
9. Dr. L. P. Miri - Member -
Assistant Professor, Govt. J.P. Verma P. G. Arts & Commerce College, Bilaspur  31.5.22
10. Dr. Rajesh Kumar Rai - Member -
Assistant Professor, Govt. Mahamaya College, Ratanpur, Bilaspur  31.05.2022
11. Dr. Kavita Krishnamoorti - Member -
Assistant Professor, Govt. Lahiri P. G. College, Chirimiri, Koriya  31.05.22

Date : 31.05.2022

Part A: Introduction			
Program: Certificate Course	Class: B.Sc. 1 Year	Year: 2022	Session: 2022-2023
1 Course Code	ZOOL- 2T		
2 Course Title	Cell Biology, Histology and Comparative Anatomy & Physiology of Chordates		
3 Course Type	Theory		
4 Pre-requisite (if any)	To study this course, a student must have/had the subject Biology in class 12 th .		
5 Course Learning Outcomes (CLO)	<p>At the end of this course, the students will be able :</p> <ul style="list-style-type: none"> • Understand the basic structure, functioning of the cell and cell organelles and understand the intricate cellular mechanisms involved. • Understand the tissues, how tissues are produced from cells in a normal course and about any malfunctioning which may lead to benign or malignant tumor. • Develop an understanding of the evolution of vertebrates thus integrating structure, function and development. • Understand the morphological, anatomical and physiological adaptation in diverse habitats. • 5. Develop an understanding of the evolution of vertebrates thus integrating structure, function and development. 		
6 Credit Value	Theory : 4		
7 Total Marks	Max. Marks: 50	Min Passing Marks : 17	

Part B: Content of the Course		
Total Lecturer: 60		
Unit	Topics	No. of Lectures
I	<p>Prokaryotic and Eukaryotic cells : General structure of prokaryotes, bacteria, archaea and eukaryotes. Ultra structure and function of endoplasmic reticulum, ribosomes, Golgi apparatus, lysosome, Mitochondria, nuclear apparatus.</p> <p>Cell membrane and transport mechanism : Structure, composition, models and function. Fluid mosaic model Junctional complexes, membrane receptor modifications : microvilli, desmosomes and plasmodesmata.</p>	12
II	<p>Cell cycle, cell signaling and cell culturing : Cell cycle, cell division – mitosis and meiosis. Cell division check points and their regulation. Role of growth factors. Programmed cell death (Apoptosis).</p> <p>Cell regulation and cell signaling : Signaling molecules and their receptors. Functions of cell surface receptors. Regulation of signaling pathways.</p> <p>Cell culture : Types of cell culture – monolayer and suspension culture. Types of culture media. Basic characteristics of tissue culture media. Tissue culture and engineering.</p>	12
III	<p>Structure and functional significance of animal tissues : Introduction to tissues. Epithelial tissue: types, structure and characteristics. Exocrine and endocrine glands: type and structure. Structure and function of loose, dense and adipose tissue. Muscular tissue: Ultra structure of smooth, skeletal and cardiac muscles. Muscle contraction. Membrane of the brain and spinal cord.</p>	11
IV	<p>Structure and function of integument, skeletal, digestive, circulatory system :</p> <p>Integument : Structure of integument from fish to mammals. Function of integument. Epidermal and dermal derivatives of integument and their functional significance.</p> <p>Skeletal system : Comparative account of pelvic and pectoral girdles from fishes (cartilaginous and bony) to mammals.</p> <p>Digestive system : Dentition in mammals. Comparative study of alimentary canal and digestive glands from fish to mammal. Physiology of digestion in mammal.</p>	13


 31/5-2022

	Circulatory system: Evolution of aortic arches and their significance. Structure and evolution of heart in vertebrates. Cardiac cycle. Blood : Composition and function.	
V	Structure and function of circulatory, respiratory, excretory, reproductive and endocrine system : Respiratory system : Aquatic and terrestrial respiration. Comparative anatomy of lungs in amphibian, reptile, bird and mammals. Excretory system : Physiology of excretion, urine formation. Reproductive system : Comparative details of testes and ovaries from fishes to mammals. Estrous and menstrual cycle. Endocrine system : Types and functional significance of endocrine glands and hormones.	12
Keywords: Tissue, Endocrine glands, Girdles, Cell signaling, Cell culture, Excretion, Circulatory system, Aortic arches, Heart, Reproductive cycle.		

Part C - Learning Resource	
Text Books, Reference Books, Other Resources -	
<ol style="list-style-type: none"> Books of M. P. Hindi Granth Academy Rastogi V. B. : Introduction to Cytology Cell Biology and Molecular Biology : N. Arumugam Cell Biology : N. Arumugam Molecular Cell Biology : N. Arumugam Cell Biology, Genetics, Molecular Biology and Evolution : Verma P. S., Agrawal V. K. Sheelar and Binachi : Cell and Molecular Biology Karp : Cell and Molecular Biology De Robertis : Cell and Molecular Biology Powar C. B. : Cell Biology A Textbook of Animal Histology : A. K. Berry, Emkey Publication, Delhi A Textbook of Histology and Practical guide: J. P. Gunasegram Animal Cell Culture : R. Freshney Animal Cell and Tissue Culture : Shivangi Mathur Chordate Zoology : R. L. Kotpal & P. S. Verma Modern Text Book of Zoology – Vertebrate : R. L. Kotpal A Text Book of Chordates : A. Thangamani, N. Arumugam, Saras Publication Biology of Animals, Volume – II, Sinha, Adhikari, Ganguly Comparative Anatomy of vertebrates, 2nd edition : R. K. Saxena, Sunita Saxena Comparative Anatomy and Developmental Biology : Kotpal, Shastry and Shukla Chordata and Comparative Anatomy : R. L. Kotpal Chordate Zoology : Jordan E. L. and Verma P. S. Anatomy of Chordates, 4th edition : Weichert C. K. Comparative vertebrate Anatomy : L. H. Hyman 	
E-Resources –	
<ol style="list-style-type: none"> SWAYAM- https://swayam.gov.in/explorer?searchText= https://academic.oup.com https://medlineplus.gov https://ncj.nlon.nih.gov https://zoologylearningpoint.woodpress.com https://zoologyresources.com National digital library – https://ndl.iitkgp.ac.in e-PG Pathshala (MHRD) Portal, https://egpg.in/libnet.ac.in Science Direct Open Access Content – https://www.sciencedirect.com/book/9781843342038/ open – Access https://egyankosh.ac.in 	


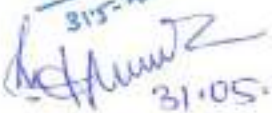


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3/5-2022

Part D: Assessment and Evaluation

University Exam(UE): Maximum Marks: 50 Marks

DECLARATION

This is to certify that the syllabus is framed by the central board of study (Zoology) as the guidelines of the department of higher education, Chhattisgarh.

1. Dr. K. R. Sahu - Chairman -
Assistant Professor, Govt. Pandit Madhav Rao Sapre College, Pendra Road

31.5.2022
2. Dr. Ajit Hundet - Member --
Professor, Govt. D. B. Girls College, Raipur

31.05.22
3. Dr. Prem Prakash Singh - Member -
Professor, Govt. College, Kusmi
- Prem Prakash Singh
31/05/2022
4. Dr. Shubhada Rahalkar - Member -
Professor, Govt. Bilasa Girls P. G. College, Bilaspur
- Rahalkar
31.5.22
5. Dr. Anil Kumar Shrivastava - Member -
Professor, Govt. V. Y. T. P. G. Autonomous College, Durg

31-5-22
6. Dr. R. K. Tamboli - Member -
Assistant Professor, Kirodimal Govt. Arts & Science College, Raigarh
- Tamboli
31.5.22
7. Dr. Parmita Dubey - Member -
Assistant Professor, Govt. J. Y. Chhattisgarh College, Raipur
- Parmita
31-5-22
8. Dr. Shashi Gupta - Member
Assistant Professor, Govt. Nagarjuna P. G. College of Science, Raipur

31-5-22
9. Dr. L. P. Miri - Member -
Assistant Professor, Govt. J.P. Verma P. G. Arts & Commerce College, Bilaspur
- Miri
31.5.22
10. Dr. Rajesh Kumar Rai - Member -
Assistant Professor, Govt. Mahamaya College, Ratanpur, Bilaspur
- Rai
31.05.2022
11. Dr. Kavita Krishnamoorti - Member -
Assistant Professor, Govt. Lahiri P. G. College, Chirimiri, Koriya
- Kallai
31.05.2022

Date : 31.05.2022

Part A: Introduction			
Program: Certificate Course	Class: B.Sc. I Year	Year: 2022	Session: 2022-2023
1	Course Code	ZOOL-1P	
2	Course Title	Lab Course - I	
3	Course Type	Practical	
4	Pre-requisite (if any)	No	
5	Course Learning Outcomes (CLO)	After completion of practical work the outcome will be : <ul style="list-style-type: none"> • Able to know animal diversity in the form of museum/slide for invertebrate and invertebrates. • Capable to enumerate biology of invertebrates. • Capable to explore anatomy of animas. • Able to understand cytological, histological and osteological configuration for animal life. • Capable to expiain hematology of animal system. 	
6	Credit Value	2	
7	Total Marks	Max. Marks: 50	Min Passing Marks : 17

Part B: Content of the Course		
Total classes: 30		
	Content	No. of classes
	<p>Tentative list of practical/exercise :</p> <p>The practical's work will be based on theory syllabus and the students will be required to show the knowledge of the following –</p> <ol style="list-style-type: none"> 1. Study of museum specimens representing to invertebrate phyla. 2. Study of permanent slides : Paramecium, Euglena, T. S. Sycon, Sponge Spicules, Sponge gemmule, Obelia colony, Obelia medusa, Ephyra larva, Fasciola larval forms (miracidium, Radia, Cercaria, Metacercaria), Trochophore larva, Zoea larva, Bipinnaria larva. 3. Dissection/ demonstration/ clay model of – <ol style="list-style-type: none"> a) Phretima : Digestive system, Reproductive system, Nervous system b) Palaemon : Appendages, Nervous system c) Periplaneta : Mouth parts, Digestive system d) Pila : Nervous system 4. Exercise based on cytology : squash preparation from onion root tip and study of cell division. 5. Study of museum specimens representing the chordata from cyclostomes to mammals. 6. Study of permanent slides of chordates – Fish skin, scales, V. S. Skin of frog, reptile, bird, mammal, T.S. liver, pancreas, testes, ovary of frog and mammal. 7. Osteology : Study of girdles of amphibian, reptile, bird and mammal. 8. Temporary mounting : <ol style="list-style-type: none"> a) Palaemon : Statocyst b) Pila : Ctenidium, osphradium c) Pheretima : Septal nephridia d) Fish scale : Placoid, Cycloid, Ctenoid 9. Exercise based on blood : blood group, blood pressure measure 10. Field visit report : Photography & identification of any five local invertebrate or vertebrate fauna. 	30


 A.K. Pal
 3-5-2022

Part C - Learning Resource	
Text Books, Reference Books, Other Resources -	
1.	Practical zoology Invertebrate : S. S. Lal
2.	Practical zoology vertebrate : S. S. Lal
3.	A Manual of practical zoology invertebrates : P. S. Verma
4.	A Manual of practical zoology Chordates : P. S. Verma
5.	Saras Practical zoology Vol. I, Vol. II, N. Arumugam

Part D: Assessment and Evaluation	
University Exam(UE):	Maximum Marks: 50 Marks

DECLARATION

This is to certify that the syllabus is framed by the central board of study (Zoology) as the guidelines of the department of higher education, Chhattisgarh.

- | | | | | | |
|-----|---|---|----------|----|----------------------------------|
| 1. | Dr. K. R. Sahu | - | Chairman | - | |
| | Assistant Professor, Govt. Pandit Madhav Rao Sapre College, Pendra Road | | | | <i>[Signature]</i>
31.5.22 |
| 2. | Dr. Ajit Hundet | - | Member | -- | <i>[Signature]</i>
31.05.22 |
| | Professor, Govt. D. B. Girls College, Raipur | | | | |
| 3. | Dr. Prem Praksah Singh | - | Member | - | <i>[Signature]</i>
31/05/2022 |
| | Professor, Govt. College, Kusmi | | | | |
| 4. | Dr. Shubhada Rahalkar | - | Member | - | <i>[Signature]</i>
31.5.22 |
| | Professor, Govt. Bilasa Girls P. G. College, Bilaspur | | | | |
| 5. | Dr. Anil Kumar Shrivastava | - | Member | - | <i>[Signature]</i>
31.5.22 |
| | Professor, Govt. V. Y. T. P. G. Autonomous College, Durg | | | | |
| 6. | Dr. R. K. Tamboli | - | Member | - | <i>[Signature]</i>
31.5.22 |
| | Assistant Professor, Kirodimal Govt. Arts & Science College, Raigarh | | | | |
| 7. | Dr. Parmita Dubey | - | Member | - | <i>[Signature]</i>
31.5.22 |
| | Assistant Professor, Govt. J. Y. Chhattisgarh College, Raipur | | | | |
| 8. | Dr. Shashi Gupta | - | Member | - | <i>[Signature]</i>
31.5.22 |
| | Assistant Professor, Govt. Nagarjuna P. G. College of Science, Raipur | | | | |
| 9. | Dr. L. P. Miri | - | Member | - | <i>[Signature]</i>
31.5.22 |
| | Assistant Professor, Govt. J.P. Verma P. G. Arts & Commerce College, Bilaspur | | | | |
| 10. | Dr. Rajesh Kumar Rai | - | Member | - | <i>[Signature]</i>
31.05.2022 |
| | Assistant Professor, Govt. Mahamaya College, Ratanpur, Bilaspur | | | | |
| 11. | Dr. Kavita Krishnamoorti | - | Member | - | <i>[Signature]</i>
31.05.22 |
| | Assistant Professor, Govt. Lahiri P. G. College, Chirimiri, Koriya | | | | |

Date : 31.05.2022

Part A: Introduction			
Program: Certificate course in Microbial Techniques and Archaeogoniate identification		Class: B.Sc.I Year	Year: 2022 Session:2022-2023
1.	Course Code	BOT-1T	
2.	Course Title	Microbial Diversity and Plant Pathology	
3.	Course Type	Theory	
4.	Pre-requisite (if any)	NO	
5.	Course Learning Outcomes (CLO)	<p>At the end of this course, the students will be able to</p> <ul style="list-style-type: none"> • Understand the Viruses, Bacteria, Phycology, Mycology and Plant pathology • Learn microbial techniques which will be beneficial for agriculture and industry. • Learn life cycles of selected genera of different groups • Understand etiology of plant diseases • Apply their knowledge in the crop fields to eradicate or avoid the diseases • Apply different biofertilizers to enhance productivity 	
6.	Credit Value	Theory: 4	
7.	Total Marks	Max. Marks: 50	Min Passing Marks: 17

Part B: Content of the Course		
Total Periods: 60		
Unit	Topics	No. of Period
I	Microbial Techniques & instrumentation: Microscopy – Light, phase contrast, scanning and transmission electron microscopy, staining techniques for light microscopy. Common equipment of microbiology lab and principle of their working – autoclave, oven, laminar air flow, centrifuge, colorimetry, spectrophotometry, electrophoresis, immobilization methods, fermentation and fermenters.	12
II	Microbial world: Cell structure of Eukaryotic and prokaryotic cells, Gram positive and Gram-negative bacteria, Structure of bacteria; Bacterial Growth curve, factors affecting growth of microbes; Sporulation, reproduction, recombination in bacteria. Viruses, general characteristics, Structure of viruses, Bacteriophages and TMV; Lytic and Lysogenic cycles, viroid, Prions & mycoplasma, phytoplasma, actinomycetes and their economic uses. Applied Microbiology: Food fermentations and food produced by microbes, Production of antibiotics, enzymes, alcoholic beverages, Lactic acid and Acetic acid production. Antigen, antibody and production of monoclonal antibodies (Hybridoma techniques).	12
III	Phycology: General characteristic features, classification and range of thallus organization. Classification and life cycle of – <i>Volvox</i> , <i>Oedogonium</i> , <i>Chara</i> , <i>Vaucheria</i> , <i>Ectocarpus</i> and <i>Polysiphonia</i> . Economic importance of algae - Role of algae in soil fertility, algae as biofertilizer, blue green algae and nitrogen economy of soil; algae as biofuel	12

for records
13.6.22

IV	<p>Mycology , Mushroom Cultivation, Lichenology & Mycorrhiza: General characteristic features, Economic importance and Classification of Fungi. Distinguishing characters of Myxomycota: General characters of Mastigomycota: <i>Phytophthora</i> and <i>Albugo</i>, Zygomycota: <i>Rhizopus</i> and <i>Mucor</i>, Ascomycota: <i>Saccharomyces</i>, <i>Penicillium</i>, <i>Peziza</i>. Basidiomycota: <i>Ustilago</i>, <i>Puccinia</i>, <i>Agaricus</i>; Deuteromycota: <i>Colletotrichum</i>, <i>Fusarium</i>, <i>Alternaria</i>. Heterothallism, Physiological specialization, Heterokaryosis & Parasexuality, Mushroom cultivation- Button and Oyster mushroom General account of lichens, reproduction and significance; Mycorrhiza: ectomycorrhiza and endomycorrhiza and their significance.</p>	12
V	<p>Plant Pathology: Disease concept, Symptoms, Etiology, Primary and secondary inoculum, pathogenesis, Koch's Postulates. Mechanism of infection and predisposing factors. Disease reoccurrence, Defence mechanism : physical and biochemical, Disease Resistance, Systemic fungicides, Organomercurials and sulphur containing fungicides</p> <p>Diseases and Control: Symptoms, Causal organism, Disease cycle and Control measures of - Early & Late Blight of Potato, Damping of seedlings, False Smut of Rice/ Brown spot of rice, Black Stem Rust of Wheat, <i>Alternaria</i> spot and White rust of Crucifers, Red Rot of Sugarcane, Wilting of Arhar, Mosaic diseases on tobacco and cucumber, yellow vein mosaic of bhindi; Citrus Canker, Little leaf of brinjal; Disease management: Quarantine organization and Integrated plant disease management, Biological control</p>	12
<p>Keywords: Microbial techniques, Mushroom cultivation, Mycology, Lichenology & Mycorrhiza, Plant diseases</p>		

Part C - Learning Resources

Suggested Readings:

1. Microbiology Fundamental and Applications (hindi) (pb) 9. ISBN: 9788188826230 Edition: 03 Year : 2016 Author : Dr. Purohit SS , Dr. Deo Publisher : Student Edition Language : Hindi
2. Modern Microbiology (hindi) (hb) ISBN: 9788177543599 Edition : 1 Year : 2018 Author : Dr. Purohit SS , Dr. Singh T Publisher : Agrobios (India)
3. Plant pathology by R.S. Mehrotra, Tata McGraw-Hill Publication

Text Books:

1. Kumar, H.D. (1999). Introductory Phycology. Affiliated East-West. Press Pvt. Ltd. Delhi. 2nd edition.
2. Tortora, G.J., Funke, B.R., Case, C.L. (2010). Microbiology: An Introduction, Pearson Benjamin Cummings, U.S.A. 10th edition.
3. Sethi, I.K. and Walia, S.K. (2011). Text book of Fungi & Their Allies, MacMillan Publishers Pvt. Ltd., Delhi.
4. Aggarwal, S. K. 2009. Foundation Course in Biology, A one books Pvt. Ltd., New Delhi.
5. Aneja, K. R. 1993. Experiments in Microbiology, Pathology and Tissue Culture, Vishwa Prakashan, New Delhi.
6. Annie Ragland, 2012. Algae and Bryophytes, Saras Publication, Kanyakumari, India.
7. Basu, A. N. 1993. Essentials of Plant Viruses, Vectors and Plant diseases, New Age International, New Delhi.
8. Chopra, G. L. 1984. A text book of Algae, Rastogi publications, Meerut, India.
9. Dubey, R. C. and Maheshwari. D.K. 2012. Practical Microbiology, S. Chand & Company, Pvt. Ltd., New Delhi.
10. Fritsch, R. E. 1977. Structure and Reproduction of Algae, Cambridge University Press, London.
11. Sharma, P.D. (2011). Plant Pathology. Meerut, U.P.: Rastogi Publication.
12. Webster, J., Weber, R. (2007). Introduction to Fungi, 3rd edition. Cambridge, U.K.: Cambridge University Press.
13. Pandey B.P. 2001. College Botany Volume I, S Chand & Company Pvt.Ltd, New Delhi.
14. Pandey, B.P. 2014 Modern Practical Botany, (Vol-I) S. Chand and Company Pvt. Ltd., New Delhi.
15. Pelzar, 1963. Microbiology, Tata Me Graw Hill, New Delhi
16. Rangaswamy, G. 2009, Disease of Crop Plants in India, Prientice Hall of India, New Delhi.

Online Resources

<https://indianculture.gov.in/rarebooks/economic-botany-india>

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Shubh
13.6.22

- ii. https://www.infinityfoundation.com/mandala/t_es/t_es_tiwari_botany_frameset.htm
- iii. https://www.researchgate.net/publication/335715457_Ancient_Indian_rishi's_Sages_knowledge_of_botany_and_medicinal_plants_since_Vedic_period_was_much_older_than_the_period_of_Theophrastus_A_case_study_who_was_the_actual_father_of_botany
- iv. <https://www.scribd.com/presentation/81269920/Botany-of-Ancient-India>
- v. https://insa.nic.in/writereaddata/UploadedFiles/IJHS/Vol17_2_17_PKBhattacharyya.pdf

Suggested equivalent online courses:

1. <https://indianculture.gov.in/rarebooks/economic-botany-india>
2. <https://community.plantae.org/tags/mooc> futurelearn.com/courses/teaching-biology-inspiring-students-with-plants-in-science
3. <https://www.coursera.org/courses?query=plants>
4. <http://egyankosh.ac.in/handle/123456789/53530>
5. <https://www.classcentral.com/tag/microbiology>
6. <https://www.edx.org/learn/microbiology>
7. <https://www.mooc-list.com/tags/microbiology>
8. <https://www.udemy.com/topic/microbiology/> <https://ucmp.berkeley.edu/bacteria/bacteria.html>
9. <https://www.livescience.com/53272-what-is-a-virus.html>
10. <https://gclambathach.in/lms/Economic%20importance%20of%20Algae.pdf>
11. <https://www.slideshare.net/sardar1109/algae-notes-1>
12. <https://www.onlinebiologynotes.com/algae-general-characteristics-classification/>
13. <https://www.sciencedirect.com/topics/immunology-and-microbiology/fungus>
14. <https://ucmp.berkeley.edu/fungi/fungi.html>
15. <https://agrimoon.com/wp-content/uploads/Mashroom-culture.pdf>
16. <http://ecoursesonline.iasri.res.in/mod/page/view.php?id=11293>
17. <http://www.hillagric.ac.in/edu/coa/ppath/lect/plpath111/Lect.%201%20%20Introduction-Pl%20Path%20111.pdf>
18. http://www.jnkvy.org/PDF/11042020102651plant_pathology.pdf
19. <https://www.apsnet.org/edcenter/disimpactmgmnt/topc/EpidemiologyTemporal/Pages/ManagementStrategies.aspx>
20. <https://learn.saylor.org/course/view.php?id=23§ionid=6821>
21. <https://www.sciencedirect.com/topics/earth-and-planetary-sciences/microscopy>
22. http://physies.fe.uni-lj.si/students/predavanja/Microscopy_Kulkarni.pdf
23. <https://lipidnanostructuresgroup.weebly.com/>
24. <https://zoology4civilservices.wordpress.com/2016/06/18/65/>
25. <https://microbenotes.com/laminar-flow-hood>

Part D: Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Maximum Marks: 50


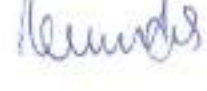


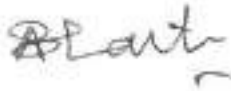

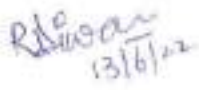



Continuous Comprehensive Evaluation (CCE): As per rule

University Exam(UE): 50Marks

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13-6-22

Declaration

This is to certify that the syllabus is framed by the Central Board of Studies (Botany) as per the guidelines (TOR) of the Department of Higher Education, Raipur Chhattisgarh.

1. Shri Prabhat Pandey
Asst. Prof.
Gramya Bharti Vidyapith, Hardibazar - Chairman 
2. Dr. A.N. Bahadur
Professor - Member 
3. Dr. Prashant Kumar Singh
Asst. Prof. - Member 
4. Dr. Awadhesh Kumar Shrivastava
Asst. Prof. - Member 
5. Dr. Ashok Kumar Bharti
Asst. Prof. - Member 
6. Dr. Smriti Chakravarty
Professor - Member 
7. Dr. Rupinder Diwan
Professor - Member 
8. Dr. Usha Chandel
Asst. Prof. - Member 
9. Mr. Kaushal Kishor
Asst. Prof. - Member 
10. ~~Manisha Gupta~~ - Member Member 

for 
13.6.22

Part A: Introduction			
Program: Certificate course in Microbial techniques and Archegoniate identification		Class: B.Sc. I Year	Year: 2022 Session: 2022-2023
1.	Course Code	BOT-2T	
2.	Course Title	Archegoniateae and Plant Architecture	
3.	Course Type	Theory	
4.	Pre-requisite (if any)	NO	
5.	Course Learning Outcomes (CLO)	<p>At the end of this course, the students will be able to</p> <ul style="list-style-type: none"> • Understand the General characteristics and affinities of Bryophytes, Pteridophytes and Gymnosperms • Phylogenetic relationships with the help of Palaeobotanical studies • Learn morphology, and- flower architecture of angiosperms 	
6.	Credit Value	Theory: 4	
7.	Total Marks	Max. Marks: 50	Min Passing Marks: 17

Part B: Content of the Course		
Total Periods: 60		
Unit	Topics	No. of Period
I	Introduction to Archegoniateae & Bryophytes: Unique features of archegoniateae, Bryophytes: General characteristic features and Affinities, adaptations to land habit, Range of thallus organization. Classification (up to family), morphology, anatomy and reproduction of <i>Riccia</i> , <i>Marchantia</i> , <i>Anthoceros</i> and <i>Sphagnum</i> . (Developmental details not to be included). Economic importance of bryophytes.	12
II	Pteridophytes: General characteristic features and affinities, Classification (up to family) with examples, Heterospory and seed habit, stelar evolution, economic importance of Pteridophytes, Morphology, anatomy and life cycle of <i>Psilotum</i> , <i>Lycopodium</i> , <i>Selaginella</i> , <i>Equisetum</i> , <i>Pteris</i> and <i>Marselia</i> .	12
III	Gymnosperms: Classification and distribution of gymnosperms; Salient features of Cycadales, Ginkgoales, Coniferales and Gnetales, their examples, structure and reproduction; economic importance, Morphology, anatomy and life cycle of <i>Cycas</i> , <i>Pinus</i> and <i>Ephedra</i> .	12
IV	Palaeobotany: General account, Geological time scale; Brief account of process of fossilization & types of fossils and their study techniques; Fossil plants: <i>Rhynia</i> , <i>Williamsonia</i> , <i>Cycadeoidea</i> . Contribution of Prof. Birbal Sahni	12
V	Angiosperm Morphology (Stem, Roots, Leaves, Flowers and Inflorescence: Morphology and modifications of root; Stem, leaf and bud. Types of inflorescences; flowers, flower parts, fruits and types of placentation; Definition	12

for March
13.6.22

and types of seeds.

Keywords: Archaeogoniatae, Bryophyta, *Rhynia*, Heterospory, Angiosperms, Fossil

Part C -Learning Resources

1. Gangulee H. S. and K. Kar 1992, College Botany Vol. I and II. (New Central Book Agency)
2. Bhatnagar, S.P. and Moitra, A. (1996). Gymnosperms. New Age International (P) Ltd Publishers, New Delhi, India.
3. Pandey S.K. (2012). Quick Concept of Botany. Publisher LAP LAMBERT Academic Publishing GmbH & Co. KG, Germany (ISBN: 978-3-8484-3104-5).
4. Parihar, N.S. (1991). An introduction to Embryophyta. Vol. I. Bryophyta. Central Book Depot, Allahabad.
5. Rashid A (1999) An Introduction to Pteridophyta, Vikas Publishing House Pvt. Ltd. New Delhi.
6. Sharma OP (1990) Textbook of Pteridophyta. MacMillan India Ltd. Delhi.
7. Vashishtha BR, Sinha AK and Kumar A (2010) Botany for Degree Students – Pteridophyta, S. Chand and Company,
8. Vashishtha BR, Sinha AK and Kumar A (2010) Botany for Degree Students – Gymnosperms, S. Chand and
9. Parihar NS (1976) Biology and Morphology of Pteridophytes. Central Book Depot.
10. Bhatnagar SP (1996) Gymnosperms, New Age International Publisher.
11. Pandey BP (2010) College Botany Vol II S. Chand and Company, New Delhi .

Online Resources

1. <https://www.anbg.gov.au/bryophyte/what-is-bryophyte>.
2. <https://pteridoportal.org/portal/index.php>
3. <https://www.conifers.org/zz/gymnosperms.php>
4. <http://www.mobot.org/MOBOT/research/APweb/>
5. <https://milncorchid.weebly.com/plant-id-for-beginners>
6. <http://webapp1.dlib.indiana.edu/inauthors/view?docId=VAC0868&doc.view=print>
7. <https://palynology.org/>
8. <http://www2.estrellamountain.edu/faculty/farabee/biobk/Biobookflowers.html>
9. <https://www.sciencelearn.org.nz/resources/100-plant-reproduction>
10. <https://palaeobotany.org>

Part D: Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Maximum Marks: 50

Continuous Comprehensive Evaluation (CCE):As per rule

University Exam(UE): 50Marks

For
13.6.22

Declaration

This is to certify that the syllabus is framed by the Central Board of Studies (Botany) as per the guidelines (TOR) of the Department of Higher Education, Raipur Chhattisgarh.

1. Shri Prabhat Pandey
Asst. Prof.
Gramya Bharti Vidyapith, Hardibazar - Chairman
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Professor - Member *Prabhat*
Govt. E.R.R. P.G. Science College, Bilaspur
3. Dr. Prashant Kumar Singh
Asst. Prof. - Member *Prashant*
Govt. V.B. Singh Dev Girls College, Jashpur
4. Dr. Awadhesh Kumar Shrivastava
Asst. Prof. - Member *Awadhesh*
Govt. D.T. P.G. College, Utai, Durg
5. Dr. Ashok Kumar Bharti
Asst. Prof. - Member *Ashok*
Kirodimal Govt. Arts & Science College, Raigarh
6. Dr. Smriti Chakravarty
Professor - Member *Smriti*
Govt. J.Y. Chhattisgarh College, Raipur
7. Dr. Rupinder Diwan
Professor - Member *Rupinder*
Govt. Nagarjun P.G. College of Science, Raipur
8. Dr. Usha Chandel
Asst. Prof. - Member *Usha*
Govt. Dr. W.W. Patankar Girls P.G. College, Durg
9. Mr. Kaushal Kishor
Asst. Prof. - Member *Kaushal*
Govt. Pt. Shyamacharan Shukla College, Dharsiwa,
Raipur
10. ~~Manish Gupta~~ - Member

Prabhat
13.6.22

Part A : Introduction			
Programme: Certificate		Class B.Sc.-I	Year: 2022
		Session: 2022-23	
1.	Course Code	BOT-1P	
2.	Course Title	Microbial Techniques and Archeogoniate identification	
3.	Course Type	Practical	
4.	Pre-requisite (if any)	No	
5.	Course outcomes:	<p>After the completion of the course the students will be able to:</p> <ul style="list-style-type: none"> • Understand the instruments, techniques and good lab practices for working in a microbiology laboratory. • Develop skills for identifying microbes and using them for Industrial, Agriculture and Environment purposes. • Practical skills in the field and laboratory experiments in Microbiology & Pathology. • learn to identify Algae, Lichens and plant pathogens along with their Symbiotic and Parasitic associations. • Can initiate his own Plant & Seed Diagnostic Clinic • Can start own enterprise on microbial products 	
6.	Credit Value	2	
7.	Total Marks	Max. Marks: 50	Min. Passing Marks:17
Part B : Content of the Course			
Total No. of Periods – 30			
Tentative Practical List	<p>Topic * (Minimum Any three from each unit depending on facilities and syllabus. 20% for spotting, 10% each for viva and sessional and rest 60 % marks equally in each unit.)</p>		
	<p>INSTRUMENTS & TECHNIQUES: 1. Laboratory safety and good laboratory practices. 2. Principles and application of Laboratory instruments-microscope, incubator, autoclave, centrifuge, Laminar air flow, filtration unit, shaker, pH meter. 3. Buffer preparation & titration 4. Cleaning and Sterilization of glassware 5. Preparation of media- PDA and NAM 6. Inoculation and culturing of Fungi and bacteria</p>		
	<p>BACTERIAL IDENTIFICATION: 1. Isolation of bacteria. 2. Staining techniques: Gram's, staining</p>		
	<p>MYCOLOGY: 1. Study/ Slide preparation and . Staining of fungi. <i>Rhizopus</i>, <i>Saccharomyces</i>, <i>Penicillium</i>, <i>Peziza</i>, <i>Ustilago</i>, <i>Puccinia</i>; <i>Fusarium</i>, <i>Alternaria</i>. <i>Agaricus</i>;</p>		

For Records
13.6.22

2. Lichens: crustose, foliose and fruticose specimens.

PHYCOLOGY:

1. Study / Slide preparation and Staining of algae –

Volvox, Oedogonium and Chara; Vaucheria; Ectocarpus Polysiphonia

EXPERIMENTAL PLANT PATHOLOGY

Isolation of pathogen from diseased leaf.

Identification: Pathological specimens of Brown spot of rice, Bacterial blight of rice, Loose smut of wheat, red rot of sugar cane, Tikka disease of ground nut, Slides of uredial, telial, pycnial & aecial stages of *Puccinia*. Few viral and bacterial plant diseases. like- Leaf curl of Papaya, Citrus canker

PRACTICALS IN APPLIED MICROBIOLOGY

1. Isolation of rhizosphere to non rhizosphere population of bacteria.
2. Isolation of phyllosphere microflora.
3. Alcohol production from grapes in anaerobic condition
4. Isolation of lactic acid bacteria from curd.
5. Enzyme production and assay – catalase, protease and amylase.

Bryophyta:

Study of morphology and anatomy of :

1. *Riccia*
2. *Marchantia*
3. *Anthoceros*
4. *Sphagnum*

Pteridophyta:

Study of morphology and anatomy of :

1. *Lycopodium*
2. *Selaginella*
3. *Equisetum*
4. *Pteris*
5. *Marsella*

Gymnosperm:

Study of morphology and anatomy of :

1. *Cycas*
2. *Pinus*
3. *Ephedra*

Part C - Learning Resource

Text Books, Reference Books, Other Resources

Suggested Readings:

1. Practical Botany (Part I) ISBN #:81-301-0008-8 Sunil D Purohit, Gotam K Kukda & Anamika Singhvi Edition:2013 Apex Publishing House Durga Nursery Road, Udaipur, Rajasthan (bilingual).
2. Pandey S.K. (2012). Quick Concept of Botany. Publisher LAP LAMBERT Academic Publishing GmbH & Co. KG, Germany (ISBN: 978-3-8484-3104-5).
3. Dubey, R. C. and Maheshwari. D.K. 2012. Practical Microbiology, S. Chand & Company, Pvt. Ltd., New Delhi.
4. Pandey. B.P. 2014 Modern Practical Botany, (Vol-I) S, Chand and Company Pvt. Ltd., New Delhi.

For Records
13.6.22

E-learning Resources:

5. <https://community.plantae.org/tags/mooc>
6. futurelearn.com/courses/teaching-biology-inspiring-students-with-plants-in-science
7. <https://microbiologysociety.org/publication/education-outreach-resources/basic-practical-microbiology-a-manual.html>
8. <https://microbiologyonline.org/file/7926d7789d8a2f7b2075109f68c3175c.pdf>
9. <http://allaboutalgae.com/benefits/>
10. <https://repository.cimmyt.org/xmlui/bitstream/handle/10883/3219/64331.pdf>
11. <https://www.mooc-list.com/tags/microbiology>
12. <http://www.agrifs.ir/sites/default/files/A%20text%20book%20of%20practical%20botany%201%20%7BAshok%20Bendre%7D%20%5B8%20%281984%29.pdf>
13. <https://www.coursera.org/courses?query=plants>
15. <http://egyankosh.ac.in/handle/123456789/53530>
16. <https://www.classcentral.com/tag/microbiology>
17. <https://www.edx.org/learn/microbiology>
18. <https://www.mooc-list.com/tags/microbiology>
19. <https://www.udemy.com/topic/microbiology/>

Part D – Assessment and Evaluation**Suggested Continuous Evaluation Methods:**

Maximum Marks: 50

Continuous Comprehensive Evaluation (CCE): Not Applicable

University Exam(UE): 50 Marks

Internal Assessment:Continuous Comprehensive
Evaluation (CCE)

Class Test/Assignment/Presentation

As per rules

For Records
13.6.22

Declaration

This is to certify that the syllabus is framed by the Central Board of Studies (Botany) as per the guidelines (TOR) of the Department of Higher Education, Raipur Chhattisgarh.

- | | | | |
|--|---|----------|-----------------------------|
| 1. Shri Prabhat Pandey
Asst. Prof.
Gramya Bharti Vidyapith, Hardibazar | - | Chairman | <i>Pandey</i> |
| 2. Dr. A.N. Bahadur
Professor
Govt. E.R.R. P.G. Science College, Bilaspur | - | Member | <i>Bahadur</i> |
| 3. Dr. Prashant Kumar Singh
Asst. Prof.
Govt. V.B. Singh Dev Girls College, Jashpur | - | Member | <i>Prashant</i> |
| 4. Dr. Awadhesh Kumar Shrivastava
Asst. Prof.
Govt. D.T. P.G. College, Utai, Durg | - | Member | <i>Awadhesh</i> |
| 5. Dr. Ashok Kumar Bharti
Asst. Prof.
Kirodimai Govt. Arts & Science College, Raigarh | - | Member | <i>Ashok</i> |
| 6. Dr. Smriti Chakravarty
Professor
Govt. J.Y. Chhattisgarh College, Raipur | - | Member | <i>Smriti</i>
13/06/2022 |
| 7. Dr. Rupinder Diwan
Professor
Govt. Nagarjun P.G. College of Science, Raipur | - | Member | <i>Rupinder</i>
13/6/22 |
| 8. Dr. Usha Chandel
Asst. Prof.
Govt. Dr. W.W. Patankar Girls P.G. College, Durg | - | Member | <i>Usha</i>
13/6/22 |
| 9. Mr. Kaushal Kishor
Asst. Prof.
Govt. Pt. Shyamacharan Shukla College, Dharsiwa,
Raipur | - | Member | <i>Kaushal</i> |
| 10. Manisha Gupta | - | Member | |

for
Pandey
13.6.22



हेमचंद्र यादव विश्वविद्यालय, दुर्ग (छ.ग.)

(पूर्व नाम- दुर्ग विश्वविद्यालय, दुर्ग)

रायपुर नाका दुर्ग (छ.ग.)-491001

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वेब साइट : www.durguniversity.ac.in

दूरभाष : 0788-2359400

क्र. 2960/A /अका./2020

दुर्ग, दिनांक 10/9/2020

प्रति,

प्राचार्य,
समस्त संबद्ध महाविद्यालय,
हेमचंद्र यादव विश्वविद्यालय,
दुर्ग (छ.ग.)

विषय:- स्नातक स्तर भाग-दो के पाठ्यक्रम विषयक।

संदर्भ:- संयुक्त संचालक, उच्च शिक्षा विभाग के पत्र क्र. 2456/315/आउशि/सम/2019, दिनांक 16.05.2019।

—00—

विषयांतर्गत लेख है कि संदर्भित पत्र के माध्यम से प्राप्त स्नातक स्तर भाग-दो के निम्नलिखित कक्षा/विषयों के परिवर्तित/संशोधित पाठ्यक्रम शिक्षा सत्र 2020-21 से लागू किये जाते हैं:-

1. बी.ए. - आधार पाठ्यक्रम-हिन्दी भाषा, हिन्दी साहित्य, राजनीतिशास्त्र, अर्थशास्त्र, नृत्य, दर्शनशास्त्र, समाजशास्त्र, इतिहास, मानवविज्ञान, संस्कृत, सांख्यिकी प्राचीन भारतीय इतिहास, भूगोल, मनोविज्ञान
2. बी.एस-सी.- आधार पाठ्यक्रम-हिन्दी भाषा, जीव विज्ञान, मानवविज्ञान, बायोटेक्नोलॉजी, कम्प्यूटर साईंस, गणित, भौतिक शास्त्र, प्राणीशास्त्र, सूक्ष्मजीव विज्ञान, वनस्पतिशास्त्र, भूविज्ञान, इलेक्ट्रॉनिक्स, रसायन शास्त्र, सांख्यिकी, भूगोल।
3. बी.ए./बी.एस.सी (गृह विज्ञान) - आधार पाठ्यक्रम - हिन्दी भाषा एवं गृह विज्ञान।

उपरोक्त विषयों को शिक्षा सत्र 2020-21 से संशोधित रूप में स्नातक स्तर भाग-दो के लिए लागू किया जाता है स्नातक स्तर भाग-एक हेतु सत्र 2019-20 में लागू पाठ्यक्रम मान्य होंगे एवं भाग - तीन के पाठ्यक्रम यथावत रहेंगे।

टीप:- परिवर्तित/संशोधित पाठ्यक्रम विश्वविद्यालय के परीक्षा विभाग एवं वेबसाइट पर प्रकाशित करने हेतु वेबसाइट प्रभारी को उपलब्ध करा दी गई है।

कुलसचिव

क्र. 2961/A /अका./2020

दुर्ग, दिनांक 10/9/2020

प्रतिलिपि:-

1. संयुक्त संचालक, उच्च शिक्षा विभाग के पत्र क्र. 2456/315/आउशि/सम/2019, दिनांक 16.05.2019 परिपेक्ष्य में सूचनार्थ।
2. उपकुलसचिव, परीक्षा विभाग एवं उपकुलसचिव, गोपनीय विभाग हेमचंद्र यादव विश्वविद्यालय, दुर्ग।
3. कुलपति के निज सहायक एवं कुलसचिव के निज सहायक, हेमचंद्र यादव विश्वविद्यालय, दुर्ग।

सहा. कुलसचिव (अका.)

REVISED ORDINANCE NO. 21
BACHELOR OF SCIENCE

1. The three year course has been broken up into three Parts. Part-I known as B.Sc. Part-I examination at the end of the first year, Part-II known as B.Sc. Part-II examination at the end of the second year and Part-III known as B.Sc. Part-III examination at the end of the third year.
2. A candidate who after passing (10+2) Higher Secondary or Intermediate examination of C.G. Board of Secondary Education Bhopal or any other Examination recognised by the University or C.G. Board of Secondary Education as equivalent thereto, has attended a regular course of study in an affiliated College or in the Teaching Department of the University for one academic year shall be eligible for appearing at the B.Sc. Part-I examination.
3. A candidate who, after passing the B.Sc.-I examination of the University or any other examination recognised by the University as equivalent thereto, has attended a regular course of study for one academic year in an affiliated college or in the Teaching Department of the University shall be eligible for appearing at the B.Sc. Part-II examination.
4. A candidate who, after passing the B.Sc. Part-II examination of the University, has completed a regular course of study for one academic year in an affiliated college or in the Teaching Department of the University shall be eligible for appearing at the B.Sc. Part-III examination.
5. Besides regular students, subject to their compliance with this Ordinance ex-student and non-collegiate candidates shall be permitted to offer only such subjects/papers as are taught to the regular student at any of the University Teaching Department or College.
6. Every candidate appearing in B.Sc. Part-I, Part-II and Part-III examination shall be examined in-
 - (i) Foundation Course:
 - (ii) Any one of the following combinations of three subjects:-
 1. Physics, Chemistry & Mathematics.
 2. Chemistry, Botany & Zoology.
 3. Chemistry, Physics & Geology.
 4. Chemistry, Botany & Geology.
 5. Chemistry, Zoology & Geology.
 6. Geology, Physics & Mathematics.
 7. Chemistry, Mathematics & Geology.
 8. Chemistry, Botany & Defence Studies.
 9. Chemistry, Zoology & Defence Studies.
 10. Physics, Mathematics & Defence Studies.
 11. Chemistry, Geology & Defence Studies.

12. Physics, Mathematics & Statistics
 13. Physics, Chemistry & Statistics
 14. Chemistry, Mathematics & Statistics.
 15. Chemistry, Zoology & Anthropology.
 16. Chemistry, Botany & Anthropology.
 17. Chemistry, Geology & Anthropology.
 18. Chemistry, Mathematics & Statistics.
 19. Chemistry, Anthropology & Defence Studies.
 20. Geology, Mathematics & Statistics.
 21. Mathematics, Defence Studies & Statistics
 22. Anthropology, Mathematics & Statistics
 23. Chemistry, Anthropology & Applied Statistics
 24. Zoology, Botany & Anthropology
 25. Physics, Mathematics & Electronics.
 26. Physics, Mathematics & Computer Application
 27. Chemistry, Mathematics & Computer Application
 28. Chemistry, Bio-Chemistry & Pharmacy
 29. Chemistry, Zoology & Fisheries.
 30. Chemistry, Zoology & Agriculture
 31. Chemistry, Zoology & Sericulture
 32. Chemistry, Botany & Environmental Biology
 33. Chemistry, Botany & Microbiology
 34. Chemistry, Zoology & Microbiology
 35. Chemistry, Industrial Chemistry & Mathematics
 36. Chemistry, Industrial Chemistry & Zoology
 37. Chemistry, Biochemistry, Botany
 38. Chemistry, Biochemistry, Zoology
 39. Chemistry, Biochemistry, Microbiology
 40. Chemistry, Biotechnology, Botany
 41. Chemistry, Biotechnology, Zoology
 42. Geology, Chemistry & Geography
 43. Geology, Mathematics & Geography
 44. Mathematics, Physics & Geography
 45. Chemistry, Botany & Geography
- (iii) Practical in case prescribed for coresubjects.

7. Any candidate who has passed the B.Sc. examination of the University shall be allowed to present himself for examination in any of the additional subjects prescribed for the B.Sc. examination and not taken by him at the degree examination. Such candidate will have to first appear and pass the B.Sc. Part-I examination in the subjects which he proposes to offer and then the B.Sc. Part-II and Part-III examination in the same subject. Successful candidates will be given a certificate to that effect.

8. In order to pass at any part of the three year degree course examination an examinee must obtain not less than 33% of the total marks in each subject/ group of subjects. In subject/ group of subjects where both theory and practical examination are provided an examinee must pass in both theory and practical parts of the examination separately.
9. Candidate will have to pass separately at the Part-I, Part-II and Part-III examinations. No division shall be assigned on the result of the Part-I and Part-II examination. In determining the division of the final examination, total marks obtained by the examinees in their Part-I, Part-II and Part-III examination in the aggregate shall be taken in to account. Provided in case of candidate who has passed the examination through supplementary examination having failed in one subject/ group only, the total aggregate marks being carried over for determining the division shall include actual marks obtained in the subject/ group in which he appeared at the supplementary examination.
10. Successful examinee at the Part-III examination obtaining 60% or more marks shall be places in the First Division, those obtaining less than 60% but not less than 45% marks in the Second Division and other successful examinees in the Third Division.

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SCHEME OF EXAMINATION

Subject	Paper	Max. Marks	Total Marks	Min. Marks
C Environmental Studies		75	100	33
Fild Work		25		
Foundation Course				
Hindi Language		75	75	26
English Language		75	75	26

नोट:- प्रत्येक में से 02 (दो) प्रश्न करने होंगे । सभी प्रश्न समान अंक के होंगे ।

Three Elective Subject :

1.	Physics	I	50	100	33
		II	50		
2.	Chemistry	Practical		50	17
		I	33		
		II	33	100	33
		III	34		
3.	Mathematics	Practical		50	17
		I	50		
		II	50	150	50
		III	50		
4.	Botany	I	50	100	33
		II	50		
5.	Zoology	Practical		50	17
		I	50	100	33
		II	50		
6.	Geology	Practical		50	17
		I	50	100	33
		II	50		
7.	Statistics	Practical	50		17
		I	50	100	33
		II	50		
8.	Anthropology	Practical		50	17
		I	50	100	50
		II	50		
		Practical		50	17

Subject	Paper	Max. Marks	Total Marks	Min. Marks
Compulsory Subject–Foundation Course:				
9. Defense Studies	I	50	100	33
	II	50		
	Practical			
10. MicroBiology	I	50	100	33
	II	50		
	Practical			
11. Computer Sciences	I	50	100	33
	II	50		
	Practical			
12. Information Technology	I	50	100	33
	II	50		
	Practical			
13. Industrial Chemistry	I	34	100	33
	II	33		
	III	33		
	Practical			
14. BioChemistry	I	50	100	33
	II	50		
15. BioTechnology	Practical	50	50	17
	I			
	II	50		
	Practical		50	17

USE OF CALCULATORS

The Students of Degree/P.G. Classes will be permitted to use of Calculators in the examination hall from annual 1986 examination on the following conditions as per decision of the standing committee of the Academic Council at its meeting held on 31-1-1986.

1. Student will bring their own Calculators.
2. Calculators will not be provided either by the University or examination centres.
3. Calculators with, memory and following variables be permitted +, -, x, $\frac{1}{x}$, square, reciprocal, exponentials log, square root, trigonometric functions, sine, cosine, tangent etc. factorial summation, xy, yx and in the light of objective approval of merits and demerits of the viva only will be allowed.

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संशोधित पाठ्यक्रम
बी.ए./बी.एस-सी./बी.कॉम./बी.एच.एस.-सी.
भाग - दो, आधार पाठ्यक्रम
प्रश्न पत्र - प्रथम (हिन्दी भाषा) (पेपर कोड - 0171)

पूर्णांक- 75

खण्ड - क	निम्नलिखित 5 लेखकों के पाठ शामिल होंगे -	अंक-35
	1. महात्मा गांधी - चोरी और प्रायश्चित	
	2. आचार्य नरेंद्र देव - युवकों का समाज में स्थान	
	3. वासुदेव शरण अग्रवाल - मातृभूमि	
	4. हरि ठाकुर - डॉ. खूबचंद बघेल	
	5. पं. माधवराव सप्रे - सम्भाषण-कुशलता	
खण्ड-ख	हिन्दी भाषा और उसके विविध रूप	अंक-16
	1. कार्यालयीन भाषा	
	2. मीडिया की भाषा	
	3. वित्त एवं वाणिज्य की भाषा	
	4. मशीनी भाषा	
खण्ड-ग	हिन्दी की व्याकरणिक कोटियाँ	अंक-24
	संज्ञा, सर्वनाम, विशेषण, क्रिया विशेषण, समास, संधि एवं संक्षिप्तियाँ अनुवाद व्यवहार : अंग्रेजी से हिन्दी में अनुवाद	

इकाई विभाजन-

इकाई- 1	चोरी और प्रायश्चित : महात्मा गांधी / कार्यालयीन भाषा, मीडिया की भाषा
इकाई- 2	युवकों का समाज में स्थान : आचार्य नरेंद्र देव / वित्त एवं वाणिज्य की भाषा, मशीनी भाषा
इकाई- 3	मातृभूमि: वासुदेवशरण अग्रवाल / संज्ञा सर्वनाम, विशेषण, क्रिया विशेषण
इकाई- 4	डॉ. खूबचंद बघेल : हरि ठाकुर/समास, संधि,
इकाई- 5	सम्भाषण-कुशलता : पं. माधवराव सप्रे, / अनुवाद - अंग्रेजी से हिन्दी में अनुवाद, संक्षिप्तियाँ

मूल्यांकन योजना -

प्रत्येक इकाई से एक-एक प्रश्न पूछे जाएंगे। प्रत्येक प्रश्न में आंतरिक विकल्प होगा। प्रत्येक प्रश्न के 15 अंक होंगे। प्रत्येक इकाई को दो-दो खण्डों (क्रमशः 'क' और 'ख' में) विभक्त करते हुए निर्धारित पाठ से 8 एवं शेष पाठ्य सामग्री से 7 अंक के प्रश्न होंगे। इस प्रकार पूरे प्रश्न-पत्र के पूर्णांक 75 होंगे।

पाठ्यक्रम संशोधन का औचित्य : विद्यार्थी चर्चित एवं सुप्रसिद्ध व्यक्तियों के लेख के माध्यम से समाज एवं राष्ट्रहित के साथ-साथ व्यक्तित्व विकास विषयक मुद्दों से परिचित हो सकें तथा व्याकरणक एवं भाषा विषयक प्रस्तावित पाठ्यक्रम के माध्यम से हिन्दी भाषा संबंधित प्रयोग पक्ष से परिचित होते हुए प्रतियोगी परीक्षाओं की दृष्टि से ज्ञानार्जन कर सकें।

ENGLISH LANGUAGE (Paper Code-1132)

B.A. / B.Sc. /B.COM. /B.H. Sc. - II

M.M.75

The question paper for B.A. /B.Sc./B.Com./B.H.Sc., English Language and cultural values shall comprise the following units:

UNIT-I	Short answer questions to be passed by (Five short answer questions of three marks each)	15 Marks
UNIT-II	(a) Reading comprehension of an unseen passage (b) Vocabulary	05 Marks
UNIT-III	Report-Writing	10 Marks
UNIT-IV	Expansion of an idea	10 Marks
UNIT-V	Grammar and Vocabulary based on the prescribed text book.	20+15Marks

Note: Question on all the units shall asked from the prescribed text which will Comprise Specimens of popular creative/writing and the following it any

- a Matter & technology
 - i. State of matter and its structure
 - ii. Technology (Electronics Communication, Space Science)
- b Our Scientists & Institutions
 - I. Life & work of our eminent scientist Arya Bhatt. Kaurd Charak Shusruta, Nagarjuna, J.C. Bose and C.V. Raman, S. Rmanujam, Homi J. Babha Birbal Sahani.
 - II. Indian Scientific Institutions (Ancient & Modern)

Books Prescribed:

Foundation English for U.G. Second Year - Published by M.P. Hindi Granth Academy, Bhopal.



HEMCHAND YADAV VISHWAVIDYALAYA, DURG (C.G.)
NEW CURRICULUM OF B.Sc. PART II
SESSION 2019-20
CHEMISTRY

The new curriculum will comprise of three papers of 33, 33 and 34 marks each and practical work of 50 marks. The Curriculum is to be completed in 180 working days as per UGC norms and conforming to the directives of Govt. of Chhattisgarh. The theory papers are of 60 hrs. each duration and practical work of 180 hrs duration.

Paper – I
INORGANIC CHEMISTRY **60 Hrs., Max Marks 33**

UNIT-I

CHEMISTRY OF TRANSITION SERIES ELEMENTS

Transition Elements: Position in periodic table, electronic configuration, General Characteristics, viz., atomic and ionic radii, variable oxidation states, ability to form complexes, formation of coloured ions, magnetic moment μ_{so} (spin only) and μ_{eff} and catalytic behaviour. General comparative treatment of 4d and 5d elements with their 3d analogues with respect to ionic radii, oxidation states and magnetic properties.

UNIT-II

A. OXIDATION AND REDUCTION: Redox potential, electrochemical series and its applications, Principles involved in extraction of the elements.

B. COORDINATION COMPOUNDS: Werner's theory and its experimental verification, IUPAC nomenclature of coordination compounds, isomerism in coordination compounds. Stereochemistry of complexes with 4 and 6 coordination numbers. Chelates, polynuclear complexes.

UNIT-III

COORDINATION CHEMISTRY

Valence bond theory (inner and outer orbital complexes), electroneutrality principle and back bonding. Crystal field theory, Crystal field splitting and stabilization energy, measurement of $10 Dq$ (Δ_o), CFSE in weak and strong fields, pairing energies, factors affecting the magnitude of $10 Dq$ (Δ_o , Δ_t). Octahedral vs. tetrahedral coordination.

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UNIT-IV

A. CHEMISTRY OF LANTHANIDE ELEMENTS

Electronic structure, oxidation states and ionic radii and lanthanide contraction, complex formation, occurrence and isolation, lanthanide compounds.

B. CHEMISTRY OF ACTINIDES

General features and chemistry of actinides, chemistry of separation of Np, Pu and Am from uranium, similarities between the latter actinides and the latter lanthanides

UNIT-V

A. ACIDS BASES : Arrhenius, Bronsted-Lowry, conjugate acids and bases, relative strengths of acids and bases, the Lux-flood, Solvent system and Lewis concepts of acids and bases.

B. NON-AQUEOUS SOLVENTS

.Physical properties of a solvent, types of solvents and their general characteristics, reaction in non-aqueous solvents with reference to liquid ammonia and liquid sulphur dioxide, HF, H₂SO₄ , Ionic liquids.

REFERENCE BOOKS

1. Basic Inorganic Chemistry, F. A. Cotton, G. Wilkinson and P. L. Gaus, Wiley
2. Concise Inorganic Chemistry, J. D. Lee, ELBS
3. Concepts of Models of Inorganic Chemistry, B. Douglas, D. Mc Daniel and J. Alexander, John Wiley.
4. Inorganic Chemistry, D. E. Shriver, P. W. Atkins and C. H. Langford, Oxford.
5. Inorganic Chemistry, W. W. Porterfield, Addison – Wiley.
6. Inorganic Chemistry, A. G. Sharp, ELBS.
7. Inorganic Chemistry, G. L. Miessler and D. A. Tarr, Prentice Hall.
8. Advanced Inorganic Chemistry, Satya Prakash.
9. Advanced Inorganic Chemistry, Agarwal and Agarwal
10. Advanced Inorganic Chemistry, Puri, Sharma, S. Naginchand
11. Inorganic Chemistry, Madan, S. Chand
12. Aadhunik Akarbanic Rasayan, A. K. Shrivastav & P. C. Jain, Goel Pub
13. Uchchattar Akarbanic Rasayan, satya Prakash & G. D. Tuli, Shyamal Prakashan
14. Uchchattar Akarbanic Rasayan, Puri & Sharma
15. Selected topic in Inorganic Chemistry by Madan Malik & Tuli, S. Chand.

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UNIT-I

CHEMISTRY OF ORGANIC HALIDES

Alkyl halides: Methods of preparation, nucleophilic substitution reactions – S_N1 , S_N2 and S_Ni mechanisms with stereochemical aspects and effect of solvent etc.; nucleophilic substitution, elimination reactions.

Aryl halides: Preparation, including preparation from diazonium salts, Nucleophilic Aromatic Substitution; S_NAr , Benzyne mechanism. Relative reactivity of alkyl, allyl/benzyl, vinyl and aryl halides towards nucleophilic substitution reactions.

UNIT-II

ALCOHOLS

- A. Alcohols: Nomenclature, preparation, properties and relative reactivity of 1° , 2° , 3° alcohols, Bouvaelt-Blanc Reduction for the preparation of alcohols, Dihydric alcohols – methods of formation, chemical reactions of vicinal glycols, oxidative cleavage [$Pb(OAc)_4$ and HIO_4] and pinacol-pinacolone rearrangement.
- B. Trihydric alcohols - Nomenclature, methods of formation, chemical reactions of glycerol.

PHENOLS

- A. Structure and bonding in phenols, physical properties and acidic character, Comparative acidic strength of alcohols and phenols, acylation and carboxylation.
- B. Mechanism of Fries rearrangement, Claisen rearrangement, Gatterman synthesis, Hauben-Hoesh reaction, Lederer-Manasse reaction and Reimer-Tiemann reaction.

UNIT-III

ALDEHYDES AND KETONES

- A. Nomenclature, structure and reactivity of carbonyl group. General methods of preparation of aldehydes and ketones.
- Mechanism of nucleophilic addition to carbonyl groups: Benzoin, Aldol, Perkin and Knoevenagel condensation. Condensation with ammonia and its derivatives, Wittig reaction, Mannich reaction, Beckmann and Benzil- Benzilic rearrangement.
- B. Use of acetate as protecting group, Oxidation of aldehydes, Baeyer-Villiger oxidation of ketones, Cannizzaro reaction, MPV, Clemmensen reduction, Wolf-Kishner reaction, $LiAlH_4$ and $NaBH_4$ reduction. Halogenation of enolizable ketones, An introduction to α,β -unsaturated aldehydes and ketones.

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UNIT-IV

A. CARBOXYLIC ACIDS

Preparation, Structure and bonding, Physical and chemical properties including, acidity of carboxylic acids, effects of substituents on acid strength, Hell-Volhard Zeilinsky reaction. Reduction of carboxylic groups, Mechanism of decarboxylation.

Di carboxylic acids: Methods of formation and effect of heat and dehydrating agents, Hydroxyacids.

B. CARBOXYLIC ACID DERIVATIVES

Structure of acid chlorides, esters, amides and acid anhydrides, Relative stability of acyl derivatives.

Physical properties, inter-conversion of acid derivatives by nucleophilic acyl substitution.

Mechanism of acid and base catalyzed esterification and hydrolysis.

UNIT-V

ORGANIC COMPOUNDS OF NITROGEN

A. Preparation of nitroalkanes and nitroarenes. Chemical reactions of nitroalkanes. Mechanism of nucleophilic substitution in nitroarenes and their reduction in acidic, neutral and alkaline medium.

B. Reactivity, structure and nomenclature of amines, physical properties. Stereochemistry of amines. Separation of mixture of primary, secondary and tertiary amines. Structural features affecting basicity of amines. Preparation of alkyl and aryl amines (reduction of nitro compounds and nitriles), reductive amination of aldehydic and ketonic compounds. Gabriel-Phthalimide reaction, Hofmann-Bromamide reaction, Reactions of amines, electrophilic aromatic substitution of aryl amines, Reaction of amines with nitrous acid. Synthetic transformations of aryl diazonium salts, Azo coupling.

REFERENCE BOOKS

1. Organic Chemistry, Morrison and Boyd, Prentice-Hall.
2. Organic Chemistry, L. G. Wade Jr. Prentice Hall.
3. Fundamentals of Organic Chemistry, Solomons, John Wiley.
4. Organic Chemistry, Vol I, II, III S. M. Mukherjee, S. P. Singh and R. P. Kapoor, Wiley Easters (New Age).
5. Organic Chemistry, F. A. Carey, McGraw Hill.
6. Introduction to Organic Chemistry, Struweiasser, Heathcock and Kosover, Macmillan.
7. Organic Chemistry, P. L. Soni.
8. Organic Chemistry, Bahl and Bahl.
9. Organic Chemistry, Joginder Singh.
10. Carbanic Rasayan, Bahl and Bahl.
11. Carbanic Rasayan, R. N. Singh, S. M. I. Gupta, M. M. Bakidia & S. K. Wadhwa.
12. Carbanic Rasayan, Joginder Singh.

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K. P. Kapoor

UNIT-I

A. THERMODYNAMICS-I

Intensive and extensive variables; state and path functions; isolated, closed and open systems; Zeroth law of thermodynamics. First law: Concept of heat, work, internal energy and statement of first law; enthalpy, Relation between heat capacities, calculations of q , w , U and H for reversible, irreversible and free expansion of gases under isothermal and adiabatic conditions. Joule-Thomson expansion, inversion temperature of gases, expansion of ideal gases under isothermal and adiabatic condition

B. THERMO CHEMISTRY

Thermochemistry, Laws of Thermochemistry, Heats of reactions, standard states; enthalpy of formation of molecules and ions and enthalpy of combustion and its applications; calculation of bond energy, bond dissociation energy and resonance energy from thermochemical data, effect of temperature (Kirchhoff's equations) and pressure on enthalpy of reactions, Adiabatic flame temperature, explosion temperature.

UNIT-II

A. THERMODYNAMICS-II

Second Law of Thermodynamics: Spontaneous process, Second law, Statement of Carnot cycle and efficiency of heat engine, Carnot's theorem, thermodynamic state of temperature. Concept of entropy: Entropy change in a reversible and irreversible process, entropy change in isothermal reversible expansion of an ideal gas, entropy change in isothermal mixing of ideal gases, physical signification of entropy, Molecular and statistical interpretation of entropy.

B. Gibbs and Helmholtz free energy, variation of G and A with pressure, volume, temperature, Gibbs-Helmholtz equation, Maxwell relations, Elementary idea of Third law of Thermodynamics, concept of residual entropy, calculation of absolute entropy of molecule.

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UNIT III

A CHEMICAL EQUILIBRIUM

Criteria of thermodynamic equilibrium, degree of advancement of reaction, chemical equilibria in ideal gases. Concept of Fugacity, Thermodynamic derivation of relation between Gibbs free energy of reaction and reaction quotient. Coupling of exergonic and endergonic reactions. Equilibrium constants and their quantitative dependence on temperature, pressure and concentration. Thermodynamic derivation of relations between the various equilibrium constants K_p , K_c and K_x . Le Chatelier principle (quantitative treatment). Equilibrium between ideal gas and a pure condensed phase.

B IONIC EQUILIBRIA

Ionization of weak acids and bases, pH scale, common ion effect; dissociation constants of mono protic acids (exact treatment). Salt hydrolysis-calculation of hydrolysis constant, degree of hydrolysis and pH for different salts. Buffer solutions; derivation of Henderson equation and its applications. Solubility and solubility product of sparingly soluble salts – applications of solubility product principle.

UNIT-IV

PHASE EQUILIBRIUM

A. Phase rule, Phase, component and degree of freedom, derivation of Gibbs phase rule, Clausius-Claperon equation and its applications to Solid-Liquid, Liquid-Vapor and Solid-Vapor, limitation of phase rule, applications of phase rule to one component system: Water system and sulphur system.

Application of phase rule to two component system: Pb-Ag system, desilverization of lead, Zn-Mg system, Ferric chloride-water system, congruent and incongruent melting point and eutectic point.

Three component system: Solid solution liquid pairs.

B. Nernst distribution law, Henry's law, application, solvent extraction

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UNIT V

PHOTOCHEMISTRY

Characteristics of electromagnetic radiation, Interaction of radiation with matter, difference between thermal and photochemical processes, Lambert-Beer's law and its limitations, physical significance of absorption coefficients. Laws of photochemistry: Grothus-Drapper law, Stark-Einstein law, quantum yield, actinometry, examples of low and high quantum yields, Photochemical equilibrium and the differential rate of photochemical reactions, Quenching, Role of photochemical reaction in biochemical process.

Jablonski diagram depicting various process occurring in the excited state, qualitative description of fluorescence, phosphorescence, non-radiative processes (internal conversion, intersystem crossing), photosensitized reactions, energy transfer processes {simple examples}, photostationary states, Chemiluminescence.

REFERENCE BOOKS

1. Physical Chemistry, G. M. Barrow, International student edition, McGraw Hill.
2. University General Chemistry, C. N. R. Rao, Macmillan.
3. Physical Chemistry, R. A. Alberty, Wiley Eastern.
4. The elements of physical chemistry, Wiley Eastern.
5. Physical Chemistry through problems, S. K. Dogra & S. Dogra, Wiley Eastern.
6. Physical Chemistry, B. D. Khosla,.
7. Physical Chemistry, Puri & Sharma.
8. Bhautik Rasayan, Puri, Sharma and Pathania, Vishal Publishing Company.
9. Bhautik Rasayan, P. L. Soni.
10. Bhautik Rasayan, Bahl and Tuli.
11. Physical Chemistry, R. L. Kapoor, Vol I-IV .
12. Chemical kinetics, K. J. Laidler, Pearson Educations, New Delhi (2004).

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LABORATORY COURSE

INORGANIC CHEMISTRY

Qualitative semimicro analysis of mixtures containing 5 radicals. Emphasis should be given to the understanding of the chemistry of different reactions. The following radicals are suggested:

CO_3^{2-} , NO_2^- , S^{2-} , SO_3^{2-} , $\text{S}_2\text{O}_3^{2-}$, CH_3COO^- , F^- , Cl^- , Br^- , I^- , NO_3^- , BO_3^{3-} , $\text{C}_2\text{O}_4^{2-}$, PO_4^{3-} , NH_4^+ , K^+ , Pb^{2+} , Cu^{2+} , Cd^{2+} , Bi^{3+} , Sn^{2+} , Sb^{3+} , Fe^{3+} , Al^{3+} , Cr^{3+} , Zn^{2+} , Mn^{2+} , Co^{2+} , Ni^{2+} , Ba^{2+} , Sr^{2+} , Ca^{2+} , Mg^{2+} .

Mixtures should preferably contain one interfering anion, or insoluble component (BaSO_4 , SrSO_4 , PbSO_4 , CaF_2 or Al_2O_3) or combination of anions e.g. CO_3^{2-} and SO_3^{2-} , NO_2^- and NO_3^- , Cl^- , Br^- , and I^- .

Volumetric analysis

- Determination of acetic acid in commercial vinegar using NaOH.
 - Determination of alkali content-antacid tablet using HCl.
 - Estimation of calcium content in chalk as calcium oxalate by permanganometry.
 - Estimation of hardness of water by EDTA.
 - Estimation of ferrous & ferric by dichromate method.
 - Estimation of copper using thiosulphate.
- Principles involved in chromatographic separations. Paper chromatographic separation of following metal ions: i. Ni (II) and Co (II) ii. Fe (III) and Al (III)

ORGANIC CHEMISTRY

- Detection of elements (X, N, S).
- Qualitative analysis of unknown organic compounds containing simple functional groups (alcohols, carboxylic acids, phenols, nitro, amine, amide, and carbonyl compounds, carbohydrates)
- Preparation of Organic Compounds:
 - m-dinitrobenzene, (ii) Acetanilide, (iii) Bromo/Nitro-acetanilide, (iv) Oxidation of primary alcohols-Benzoic acid from benzylalcohol, (v) azo dye.

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PHYSICAL CHEMISTRY

Transition Temperature

- Determination of the transition temperature of the given substance by thermometric/dilatometric method (e.g. $\text{MnCl}_2 \cdot 4\text{H}_2\text{O}$ / $\text{SrBr}_2 \cdot 2\text{H}_2\text{O}$).

Thermochemistry

- Determination of heat capacity of a calorimeter for different volumes using change of enthalpy data of a known system (method of back calculation of heat capacity of calorimeter from known enthalpy of solution or enthalpy of neutralization).
- Determination of heat capacity of the calorimeter and enthalpy of neutralization of hydrochloric acid with sodium hydroxide.
- To determine the solubility of benzoic acid at different temperature and to determine ΔH of the dissolution process.
- To determine the enthalpy of neutralization of a weak acid/ weak base versus strong base/ strong acid and determine the enthalpy of ionization of the weak acid/ weak base.
- To determine the enthalpy of solution of solid calcium chloride and calculate the lattice energy of calcium chloride from its enthalpy data using Born Haber cycle.

Phase Equilibrium

- To study the effect of a solute (e.g. NaCl, Succinic acid) on the critical solution temperature of two partially miscible liquids (e.g. phenol-water system) and to determine the concentration of that solute in the given phenol-water system.
- To construct the phase diagram of two component system (e.g. diphenylamine–benzophenone) by cooling curve method.
- Distribution of acetic/ benzoic acid between water and cyclohexane.
- Study the equilibrium of at least one of the following reactions by the distribution method:
 - (i) $\text{I}_2(\text{aq}) + \text{I}^- \rightarrow \text{I}_3^-(\text{aq})$
 - (ii) $\text{Cu}^{2+}(\text{aq}) + n\text{NH}_3 \rightarrow \text{Cu}(\text{NH}_3)_n$

Molecular Weight Determination

Determination of molecular weight by Rast Camphor and Landsburger method.

Note: Experiments may be added/ deleted subject to availability of time and facilities.

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Reference Books

1. Mann, F.G. & Saunders, B.C. Practical Organic Chemistry, Pearson Education (2009)
2. Furniss, B.S., Hannaford, A.J., Smith, P.W.G. & Tatchell, A.R. Practical Organic Chemistry, 5th Ed. Pearson (2012)
3. Ahluwalia, V.K. & Aggarwal, R. Comprehensive Practical Organic Chemistry: Preparation and Quantitative Analysis, University Press (2000). 22
4. Ahluwalia, V.K. & Dhingra, S. Comprehensive Practical Organic Chemistry: Qualitative Analysis, University Press (2000).
5. Khosla, B. D.; Garg, V. C. & Gulati, A. Senior Practical Physical Chemistry, R. Chand & Co.: New Delhi (2011). Garland, C. W.; Nibler, J. W. & Shoemaker, D. P. Experiments in Physical Chemistry 8th Ed.; McGraw-Hill: New York (2003).
6. Halpern, A. M. & McBane, G. C. Experimental Physical Chemistry 3rd Ed.; W.H. Freeman & Co.: New York

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Three Experiments are to be performed.

1. Inorganic – Qualitative semimicro analysis of mixtures. **12 marks**

OR

One experiment from synthesis and analysis by preparing the standard solution.

2. (a) Identification of the given organic compound & determine its M.Pt./B.Pt.

6 marks

(b) Determination of Rf value and identification of organic compounds by paper chromatography. **6 marks**

3. Any one physical experiment that can be completed in two hours including calculations.

12 marks

4. Viva

10 marks

5. Sessional

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In case of Ex-Students one marks will be added to each of the experiment.

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B.Sc.-II (BOTANY) PAPER-I

(PLANT TAXONOMY, ECONOMIC BOTANY, PLANT ANATOMY AND EMBRYOLOGY)

UNIT-I

Bentham and Hooker system of classification. Binomial Nomenclature, International Code of Nomenclature for Algae, Fungi, and plants (IUCN), Typification, numerical Taxonomy and chemotaxonomy. Preservation of Plant material and Herbarium techniques. Important botanical gardens and herbaria of India, Kew Botanical garden, England.

UNIT-II

Systematic position, distinguishing characters and economic importance of the following families, Ranunculaceae, Magnoliaceae, Brassicaceae, Rosaceae, Papaveraceae, Caryophyllaceae, Rutaceae, Cucurbitaceae, Apiaceae, Rubiaceae, Apocynaceae, Asclepiadaceae, Solanaceae, Malvaceae, Convolvulaceae, Orchidaceae, Acanthaceae, verbenaceae, Lamiaceae, Asteraceae, Fabaceae, Euphorbiaceae, Poaceae and Liliaceae.

UNIT-III

Economic Botany: Botanical name, family, part used and uses of the following economically important plants, fiber yielding plants; Cotton, jute, sun, hemp, coir. Timber yielding plants: Sal, Teak, Shisham and Pine. Medicinal plants: Kalmegh, Ashwagandha, Ghritkumari, Giloy, Brahmi, sarpgandha, ---of medicinal plants of C.G. Food plants: Pearl millet, Buck of wheat, Sorghum, Soyabean, gram, Ground nut, Sugarcane and Potato. Fruit plants: Pear, Peach, Litchi. Spices: Cinnamon, Turmeric, Ginger, Asafoetida and Cumin. Beverages : Tea, Coffee Rubber Cultivation of important flowers: Chrysanthemum, Dahelia, Biodiesel plants Jatropha, Pongamia Ethnobotany in context of Chhattisgarh.

UNIT-IV

Plant Anatomy: Root and shoot apical meristems theories of root and shoot apex organization, permanent tissues, anatomy of root, stem and leaf of dicot and monocot, secondary growth in root and stem, Anatomical anomalies in the primary structure of stems (Nyctanthes, Boerhaavia, Casuarina), Anamolous secondary growth in Dracaena, Bignonia, Laptadenia.

UNIT-V

Embryology: Flower as a reproductive organ, anther, microsporogenesis, types of ovules, megasporogenesis, development of male and female gametophyte, pollination, mechanisms, self incompatibility, fertilization, endosperm, embryo, polyembryonoy, apomixes and parthenocarpy.

Books Recommended:

Amal
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Ravi
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Shiv
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Singh, Pandey, Jain. *Diversity and Systematics of Seed Plants*, Rastogi Publications Merrut

Sharma OP, *Plant Taxonomy*, Tata Mc Graw Hill, New Delhi

Pandey BP, *Taxonomy of Angiosperms*, S. Chand Publishing, New Delhi

Pandey, BP, *Plant Anatomy*, S.Chand Publishing, New Delhi

Pandey, BP, *Economic Botany*, S.Chand Publishing, New Delhi

Bhojwani, SS and Bhatanagar SP, *Embryology of Angiosperm*, Vikas Publication House, New Delhi

Singh, Pandey, Jain. *Embryology of Angiosperms*, Rastogi Publication, Meerut

Sharma, V, Alum, A. *Ethnobotany*, Rastogi Publications, Meerut

Tayal, MS *Plant Anatomy*, Rastogi Publication, Meerut

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Raipur, (C.G.)

(Dr. Rekha Pimpalgaonkar)

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Raipur, (C.G.)

(Mrs. Sanchal Moghe)

Govt. Bilasa Girls College, Bilaspur

(Mr. Shivakant Mishra)

(Mr. Sudheer Tiwari)

Anand
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B.Sc.-II (BOTANY) PAPER-II
(ECOLOGY AND PLANT PHYSIOLOGY)

UNIT-I

Introduction and scope of ecology, environmental and ecological factors, Soil formation and soil profile, Liebig's law of minimum, Shelford's law of tolerance, morphological and anatomical adaptations in hydrophytes, xerophytes and epiphytes.

UNIT-II

Population and community characteristics, Raunkiaer's life forms, population interactions (e.g. Symbiosis, Amensalism etc.), succession, ecotone and edge effect, ecological niches, ecotypes, ecads, keystone species

Concept of ecosystem, trophic levels, flow of energy in ecosystem, food chain and food web, concept of ecological pyramids

Biogeochemical cycles: carbon cycle, nitrogen cycle and phosphorus cycle

UNIT-III

Plant water relations: Diffusion, permeability, osmosis, imbibitions, plasmolysis, osmotic potential and water potential, Types of soil water, water holding capacity, wilting, Absorption of water, theories of Ascent of sap, Mineral nutrition and absorption, Deficiency symptoms, Transpiration, stomatal movement, significance of transpiration, Factors affecting transpiration, guttation.

UNIT-IV

Photosynthesis: Photosynthetic apparatus and pigments, light reaction mechanism of ATP synthesis. C₃, C₄ CAM pathway of carbon reduction, photorespiration, factors affecting photosynthesis.

Respiration: Aerobic and anaerobic respiration, Glycolysis, Krebs' cycle, factors affecting respiration, R.Q.

UNIT-V

Plant growth hormones: Auxin, Gibberellin, Cytokinin, Ethylene and Abscissic acid. Physiology of flowering, Florigen concept, Photoperiodism and Vernalization. Seed dormancy and germination, plant movement.

Books Recommended:

Koromondy, E.J. *Concepts of Ecology*, Prentice Hall, USA

Amal
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Singh, JS Singh SP and Gupta SR. *Ecology and Environmental Science and Conservation*, S. Chand Publishing, New Delhi

Sharma, PD. *Ecology and Environment*, Rastogi Publications, Meerut

Hopkins, WG and Huner, PA. *Introduction to Plant Physiology*, John Wiley and Sons.

Pandey SN and Sinha BK, *Plant Physiology*, Vikas Publishing, New Delhi

Taiz, L and Zeiger. E. *Plant Physiology*, 5th edition, Sinauer Associates Inc. M.A, USA

Srivastava, HS *Plant Physiology and Biotechnology*, Rastogi Publications, Meerut

B.Sc. II (BOTANY)

Practical

1. Taxonomy: Detailed description and identification of locally available plants of the families as prescribed in the theory paper.
2. Economic Botany: Identification and comment on the plants and plant products belonging to different economic use categories
3. Preparation of Herbarium of local wild plants.
4. Quantitative vegetation analysis of a grassland ecosystem.
5. Anatomical characteristics of hydrophytes and xerophytes.
6. Demonstration of root pressure.
7. Demonstration of transpiration.
8. Demonstration of evolution of O₂ in photosynthesis, factors affecting of photosynthesis.
9. Comparison of R.Q. of different respiratory substrates.
10. Demonstration of fermentation.
11. Determination of BOD of a water body.
12. Demonstration of mitosis.

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PRACTICAL SCHEME

TIME: 4 Hrs.

M.M. : 50

1.	Anatomy	08
2.	Economic Botany	04
3.	Physiology	08
4.	Ecology	10
5.	Spotting	10
6.	Viva-Voce	05
7.	Project Work/ Field Study	10



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(Mr. Shivakant Mishra)

(Mr. Sudheer Tiwari)


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Hemchand Yadav Vishwavidyala, Durg (C.G.)
Zoology
B.Sc. Part – II (2019-20)
Paper – I
(Anatomy and Physiology)

Comparative Anatomy of various organ systems of vertebrates:

Unit: I

- Integument and its derivatives: structure of scales, hair and feathers
- Alimentary canal and digestive glands in vertebrates
- Respiratory organs : Gills and lung , air-sac in birds

Unit: II

- Endoskeleton: (a) Axial Skeleton- Skull and Vertebrae, (b) Appendicular Skeleton
Limbs and girdles
- Circulatory System: Evolution of heart and aortic arches
- Urinogenital System: Kidney and excretory ducts

Unit: III

- Nervous System: General plan of brain and spinal cord
- Ear and Eye: structure and function
- Gonads and genital ducts

Unit: IV

- Digestion and absorption of dietary components
- Physiology of heart, cardiac cycle and ECG
- Blood Coagulation
- Respiration: mechanism and control of breathing

Unit: V

- Excretion: Physiology of excretion, osmoregulation
- Physiology of muscle contraction
- Physiology of nerve impulse, Synaptic transmission

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Zoology
B.Sc. Part – II (2019-20)

Paper-II

VERTEBRATE ENDOCRINOLOGY, REPRODUCTIVE BIOLOGY
BEHAVIOUR, EVOLUTION AND APPLIED ZOOLOGY

Unit: I

- Structure and function of Endocrine glands
- Hormone receptor
- Biosynthesis and secretion of thyroid, adrenal, ovarian and testicular hormones
- Endocrine disorder of pituitary, thyroid, adrenal and pancreas

Unit:II

- Reproductive cycle in vertebrates
- Menstruation, lactation and pregnancy
- Mechanism of parturition
- Hormonal regulation of gametogenesis

Unit: III

- Evidences of organic evolution.
- Theories of organic evolution.
- Variation, Mutation, Isolation and Natural selection.
- Evolution of Horse

Unit:IV

- Introduction to Ethology: Branches and concept of ethology.
- Patterns of Behaviour, Taxes, Reflexes, Drives and Stereotyped behaviour.
- Reproductive behavioural patterns.
- Drugs and behavior, Hormones and behaviour

Unit:V

- Prawn Culture
- Sericulture
- Apiculture
- Pisciculture
- Poultry keeping
- Elements of Pest Control: Chemical & Biological Control

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Zoology
B.Sc. Part II (2019-20)
Practical

The practical work in general shall be based on the syllabus prescribed and the students will be required to show the knowledge of the following:

- Study of the representative examples of the different chordates (Classified characters).
- Dissection of various systems of scoliodon-Afferent and Efferent branchial cranial nerves, internal ear.

Alternative methods: By Clay/Thermacol/ Drawing/ Model etc.)

- Simple microscopic technique through unstained or stained permanent mount.
- Study of prepared slides histological, as per theory papers.
- Study of limb girdles and vertebrae of Frog, Varanus, Fowl and Rabbit.
- Identification of species and individual of honey bee.
- Life cycle of honey bee and silkworm.
- Exercise based on Evolution and Animal behavior.

Scheme of Practical Exam

Time: 3:30hrs

- | | |
|---|----|
| • Major dissection (Cranial nerves/efferent branchial vessel) | 10 |
| • Exercise based on evolution | 05 |
| • Exercise based on applied zoology | 05 |
| • Exercise based on animal behavior | 04 |
| • Spotting-8 (slides-4,bones-2,specimen-2) | 16 |
| • Viva | 05 |
| • Sessional marks. | 05 |

(P)
14-6-19

NS
14-06-19

Jm
14-6-19



हेमचंद यादव विश्वविद्यालय, दुर्ग (छ.ग.)

(पूर्व नाम- दुर्ग विश्वविद्यालय, दुर्ग)

रायपुर नाका दुर्ग (छ.ग.)-491001

ई मेल : academic@durguniversity.ac.in

वेब साइट : www.durguniversity.ac.in

दूरभाष : 0788-2359400

क्र. 3861 / अका. / 2021

दुर्ग, दिनांक 30/7/21

प्रति,

प्राचार्य,

समस्त संबद्ध महाविद्यालय,

हेमचंद यादव विश्वविद्यालय,

दुर्ग (छ.ग.)

विषय:- स्नातक स्तर भाग-तीन के पाठ्यक्रम विषयक।

संदर्भ:- संयुक्त संचालक, उच्च शिक्षा विभाग के पत्र क्र. 2456/315/आजशि/सम/2019, दिनांक 16.05. 2019।

—00—

विषयांतर्गत लेख है कि संदर्भित पत्र के माध्यम से प्राप्त स्नातक स्तर भाग-तीन के निम्नलिखित कक्षा/विषयों के परिवर्तित/संशोधित पाठ्यक्रम शिक्षा सत्र 2021-22 से लागू किये जाते हैं:-

1. बी.ए. - आधार पाठ्यक्रम - हिन्दी भाषा, हिन्दी साहित्य, राजनीतिशास्त्र, अर्थशास्त्र, नृत्य, दर्शनशास्त्र, समाजशास्त्र, इतिहास, मानवविज्ञान, संस्कृत, सांख्यिकी प्राचीन भारतीय इतिहास, भूगोल, मनोविज्ञान
2. बी.एस-सी. - आधार पाठ्यक्रम-हिन्दी भाषा, जीव विज्ञान, मानवविज्ञान, बायोटेक्नोलॉजी, कम्प्यूटर साईंस, गणित, भौतिक शास्त्र, प्राणीशास्त्र, सूक्ष्मजीव विज्ञान, वनस्पतिशास्त्र, भूविज्ञान, इलेक्ट्रॉनिक्स, रसायन शास्त्र, सांख्यिकी, भूगोल।
3. बी.ए./बी.एस.सी - आधार पाठ्यक्रम - हिन्दी भाषा एवं गृह विज्ञान।
(गृह विज्ञान)
4. बी.सी.ए. - भाग-3
5. बी.कॉम. - भाग-1, भाग-2 एवं भाग-3 का परिवर्तित पाठ्यक्रम सत्र 2019-20 में जारी कर लागू किया जा चुका है।

कृ.प.उ.

उपरोक्त विषयों को शिक्षा सत्र 2021-22 से संशोधित रूप में स्नातक स्तर भाग-तीन के लिए लागू किया जाता है स्नातक स्तर भाग-एक हेतु सत्र 2019-20 एवं स्नातक स्तर भाग-दो हेतु सत्र 2020-21 में लागू पाठ्यक्रम मान्य होंगे।

टीप:- परिवर्तित/संशोधित पाठ्यक्रम विश्वविद्यालय की वेबसाईट पर उपलब्ध है।


कुलसचिव

क्र. 3862 /अका./2021

दुर्ग, दिनांक 30/7/21

प्रतिलिपि:-

1. संयुक्त संचालक, उच्च शिक्षा विभाग के पत्र क्र. 2456/315/आउशि/सम/2019, दिनांक 16.05.2019 के परिपेक्ष्य में सूचनार्थ
2. उपकुलसचिव, परीक्षा विभाग एवं उपकुलसचिव, गोपनीय विभाग हेमचंद यादव विश्वविद्यालय, दुर्ग।
3. वेबसाईट प्रभारी, वेबसाईट पर पाठ्यक्रम प्रकाशित करने हेतु।
4. कुलपति के निज सहायक एवं कुलसचिव के निज सहायक, हेमचंद यादव विश्वविद्यालय, दुर्ग।


सहा. कुलसचिव (अका.)

HEMCHAND YADAV VISHWAVIDYALAYA, DURG (C.G.)

Website - www.durguniversity.ac.in, Email - durguniversity@gmail.com



SCHEME OF EXAMINATION & SYLLABUS of

**B.Sc. Final Year
Session 2021-22**

**(Approved by Board of Studies)
Effective from July 2021**

REVISED ORDINANCE NO. 21

BACHELOR OF SCIENCE

1. The three year course has been broken up into three Parts. Part-I known as B.Sc. Part-I examination at the end of the first year, Part-II known as B.Sc. Part-II examination at the end of the second year and Part-III known as B.Sc. Part-III examination at the end of the third year.
2. A candidate who after passing (10+2) Higher Secondary or Intermediate examination of C.G. Board of Secondary Education Bhopal or any other Examination recognised by the University or C.G. Board of Secondary Education as equivalent thereto, has attended a regular course of study in an affiliated College or in the Teaching Department of the University for one academic year shall be eligible for appearing at the B.Sc. Part-I examination.
3. A candidate who, after passing the B.Sc.-I examination of the University or any other examination recognised by the University as equivalent thereto, has attended a regular course of study for one academic year in an affiliated college or in the Teaching Department of the University shall be eligible for appearing at the B.Sc. Part-II examination.
4. A candidate who, after passing the B.Sc. Part-I examination of the University, has completed a regular course of study for one academic year in an affiliated college or in the Teaching Department of the University shall be eligible for appearing at the B.Sc. Part-III examination.
5. Besides regular students, subject to their compliance with this Ordinance ex-student and non-collegiate candidates shall be permitted to offer only such subjects/papers as are taught to the regular student at any of the University Teaching Department or College.
6. Every candidate appearing in B.Sc. Part-I, Part-II and Part-III examination shall be examined in-
 - (i) Foundation Course:
 - (ii) Any one of the following combinations of three subjects:-
 1. Physics, Chemistry & Mathematics.
 2. Chemistry, Botany & Zoology.
 3. Chemistry, Physics & Geology.
 4. Chemistry, Botany & Geology.
 5. Chemistry, Zoology & Geology.
 6. Geology, Physics & Mathematics.
 7. Chemistry, Mathematics & Geology.
 8. Chemistry, Botany & Defence Studies.
 9. Chemistry, Zoology & Defence Studies.
 10. Physics, Mathematics & Defence Studies.
 11. Chemistry, Geology & Defence Studies.
 12. Physics, Mathematics & Statistics.
 13. Physics, Chemistry & Statistics.
 14. Chemistry, Mathematics & Statistics.
 15. Chemistry, Zoology & Anthropology.
 16. Chemistry, Botany & Anthropology.
 17. Chemistry, Geology & Anthropology.
 18. Chemistry, Mathematics & Statistics.

19. Chemistry, Anthropology & Defence Studies.
20. Geology, Mathematics & Statistics.
21. Mathematics, Defence Studies & Statistics
22. Anthropology, Mathematics & Statistics
23. Chemistry, Anthropology & Applied Statistics
24. Zoology, Botany & Anthropology
25. Physics, Mathematics & Electronics.
26. Physics, Mathematics & Computer Application
27. Chemistry, Mathematics & Computer Application
28. Chemistry, Bio-Chemistry & Pharmacy
29. Chemistry, Zoology & Fisheries.
30. Chemistry, Zoology & Agriculture
31. Chemistry, Zoology & Sericulture
32. Chemistry, Botany & Environmental Biology
33. Chemistry, Botany & Microbiology
34. Chemistry, Zoology & Microbiology
35. Chemistry, Industrial Chemistry & Mathematics
36. Chemistry, Industrial Chemistry & Zoology
37. Chemistry, Biochemistry, Botany
38. Chemistry, Biochemistry, Zoology
39. Chemistry, Biochemistry, Microbiology
40. Chemistry, Biotechnology, Botany
41. Chemistry, Biotechnology, Zoology
42. Geology, Chemistry & Geography
43. Geology, Mathematics & Geography
44. Mathematics, Physics & Geography
45. Chemistry, Botany & Geography

(iii) Practical in case prescribed for core subjects.

7. Any candidate who has passed the B.Sc. examination of the University shall be allowed to present himself for examination in any of the additional subjects prescribed for the B.Sc. examination and not taken by him at the degree examination. Such candidate will have to first appear and pass the B.Sc. Part-I examination in the subjects which he proposes to offer and then the B.Sc. Part-II and Part-III examination in the same subject. Successful candidates will be given a certificate to that effect.
8. In order to pass at any part of the three year degree course examination an examinee must obtain not less than 33% of the total marks in each subject/ group of subjects. In subject/ group of subjects where both theory and practical examination are provided an examinee must pass in both theory and practical parts of the examination separately.
9. Candidate will have to pass separately at the Part-I, Part-II and Part-III examinations. No division shall be assigned on the result of the Part-I and Part-II examination. In determining the division of the final examination, total marks obtained by the examinees in their Part-I, Part-II and Part-III examination in the aggregate shall be taken into account. Provided in case of candidate who has passed the examination through supplementary examination having failed in one subject/ group only, the total aggregate marks being carried over for determining the division shall include actual marks obtained in the subject/ group in which he appeared at the supplementary examination.
10. Successful examinee at the Part-III examination obtaining 60% or more marks shall be placed in the First Division, those obtaining less than 60% but not less than 45% marks in the Second Division and other successful examinees in the Third Division.

- इकाई-एक (क) भारत माता : सुमित्रानंदन पंत
(ख) कथन की शैलियाँ
1. विवरणात्मक शैली
2. मूल्यांकन शैली
3. व्याख्यात्मक शैली
4. विचारात्मक शैली
- इकाई-दो (क) सूखी डाली : उपेन्द्रनाथ अशक
(ख) विभिन्न संरचनाएँ
1. विनम्रता सूचक संरचना
2. विधि सूचक संरचना
3. निषेध परक संरचना
4. काल-बोधक संरचना
5. स्थान-बोधक संरचना
6. दिशा बोधक संरचना
7. कार्य-कारण सम्बन्ध संरचना
8. अनुक्रम संरचना
- इकाई-तीन (क) वसीयत : मालती जोशी
(ख) कार्यालयीन पत्र और आलेख
1. परिपत्र
2. आदेश
3. अधिसूचना
4. ज्ञापन
5. अनुस्मारक
6. पृष्ठांकन
- इकाई-चार (क) योग की शक्ति : हरिवंश राय बच्चन
(ख) अनुवाद : स्वरूप एवं परिभाषा, उद्देश्य
स्रोत भाषा और लक्ष्य भाषा,
अच्छे अनुवाद की विशेषताएँ,
अनुवाद प्रक्रिया, अनुवादक
- इकाई-पांच (क) संस्कृति और राष्ट्रीय एकीकरण : योगेश अटल
(ख) घटनाओं, समारोहों आदि का प्रतिवेदन, विभिन्न प्रकार के निमंत्रण पत्र

मूल्यांकन योजना : प्रत्येक इकाई से एक-एक प्रश्न पूछा जाएगा। प्रत्येक प्रश्न में आंतरित विकल्प होगा। प्रत्येक प्रश्न के 15 अंक होंगे। इसलिए प्रत्येक प्रश्न के दो भाग 'क' और 'ख' होंगे एवं अंक क्रमशः 8 एवं 7 अंक होंगे। प्रश्नपत्र का पूर्णांक 75 निर्धारित है।

5/7/2024

डा. आशा निवान

Arshita Shrivastava

The question paper for B.A./B.Sc./B.Com./B.H.Sc. III Foundation course, English Language and General Answers shall comprise the following items :

Five question to be attempted, each carrying 3 marks.

UNIT-I Essay type answer in about 200 words. 5 essay type question to be asked three to be attempted.	15
UNIT-II Essay writing	10
UNIT-III Precise writing	10
UNIT-IV (a) Reading comprehension of an unseen passage	05
(b) Vocabulary based on text	10
UNIT-V Grammar Advanced Exercises	25

Note: Question on unit I and IV (b) shall be asked from the prescribed text. Which will comprise of popular create writing and the following items. Minimum needs housing and transport Geo-economic profile of M.P. communication Educate and culture. Women and Worm in Empowerment Development, management of change, physical quality of life. War and human survival, the question of human social value survival, the question of human social value, new Economic Philosophy Recent Diberaliation Method) Demoration decentralization (with reference to 73, 74 constitutional Amendment.

Books Prescribed:

Aspects of English Language and Development - Published by M.P. Hindi Granth Academy, Bhopal.

HEMCHAND YADAV VISHWAVIDYALAYA, DURG (C.G.)
NEW CURRICULUM OF B.Sc. PART III
SESSION 2021-22
CHEMISTRY

The new curriculum will comprise of three papers of 33, 33 and 34 marks each and practical work of 50 marks. The Curriculum is to be completed in 180 working days as per UGC norms and conforming to the directives of Govt. of Chhattisgarh. The theory papers are of 60 hrs. Each duration and practical work of 180 hrs duration.

Paper – I
INORGANIC CHEMISTRY **60 Hrs., Max Marks 33**

UNIT-I

METAL-LIGAND BONDING IN TRANSITION METAL COMPLEXES

(A) Limitations of valence bond theory, Limitation of Crystal Field Theory, Application of CFSE, tetragonal distortions from octahedral geometry, Jahn–Teller distortion, square planar geometry. Qualitative aspect of Ligand field and MO Theory.

(B) Thermodynamic and kinetic aspects of metal complexes. A brief outline of thermodynamic stability of metal complexes and factors affecting the stability, substitution reactions of square planar complexes, Trans- effect, theories of trans effect. Mechanism of substitution reactions of square planar complexes.

UNIT-II

MAGNETIC PROPERTIES OF TRANSITION METAL COMPLEXES

Types of magnetic behavior, methods of determining magnetic susceptibility, spin only formula, L-S coupling, correlation of μ_{so} (spin only) and μ_{eff} . values, orbital contribution to magnetic moments, application of magnetic moment data for 3d metal complexes.

Electronic spectra of Transition Metal Complexes.

Types of electronic transitions, selection rules for d-d transitions, spectroscopic ground states, spectro-chemical series. Orgel-energy level diagram for d^1 and d^2 states, discussion of the electronic spectrum of $[Ti(H_2O)_6]^{3+}$ complex ion.

UNIT-III

ORGANOMETALLIC CHEMISTRY

Definition and classification of organometallic compounds on the basis of bond type. Concept of hapticity of organic ligands. Metal carbonyls: 18-electron rule, electron count of mononuclear, polynuclear and substituted metal carbonyls of 3d series. General methods of preparation (direct combination, reductive carbonylation, thermal and photochemical decomposition) of mono and binuclear carbonyls of 3d series.

Structures of mononuclear and binuclear carbonyls of Cr, Mn, Fe, Co and Ni using VBT. π -acceptor behavior of CO (MO diagram of CO to be discussed), Zeise's salt: Preparation and structure.

Shankar
28.06.21
(Dr. Anka Tandan)

POCC
28.06.2021
(Dr. C. Bose)

Rajmani
20.06.2021
(Dr. Rajmani Patel)

Asst.
28.6.2021

Lagna
28.06.2021
Tapan Kumar

Catalysis by Organometallic Compounds –

Study of the following industrial processes and their mechanism :

1. Alkene hydrogenation (Wilkinson's Catalyst)
2. Polymerization of ethane using Ziegler – Natta Catalyst

UNIT-IV

BIOINORGANIC CHEMISTRY

Essential and trace elements in biological processes, Excess and deficiency of some trace metals, Toxicity of some metal ions (Hg, Pb, Cd and As), metalloporphyrins with special reference to hemoglobin and myoglobin. Biological role of alkali and alkaline earth metals with special reference to Ca^{2+} and Mg^{2+} , nitrogen fixation.

UNIT-V

HARD AND SOFT ACIDS AND BASES (HSAB) Classification of acids and bases as hard and soft. Pearson's HSAB concept, acid-base strength and hardness and softness. Symbiosis, Applications of HSAB principle.

INORGANIC POLYMERS

Types of inorganic polymers, comparison with organic polymers, synthesis, structural aspects and applications of silicones. Silicates, phosphazenes and polyphosphate.

REFERENCE BOOKS

1. Basic Inorganic Chemistry, F. A. Cotton, G. Wilkinson and P. L. Gaus, Wiley.
2. Concise Inorganic Chemistry, J. D. Lee, ELBS.
3. Concepts of Models of Inorganic Chemistry, B. Douglas, D. Mc Daniel and J. Alexander, John Wiley.
4. Inorganic Chemistry, D. E. Shriver, P. W. Atkins and C. H. Langford, Oxford.
5. Inorganic Chemistry, W. W. Porterfield, Addison – Wiley.
6. Inorganic Chemistry, A. G. Sharp, ELBS.
7. Inorganic Chemistry, G. L. Miessler and D. A. Tarr, Prentice Hall.
8. Advanced Inorganic Chemistry, Satya Prakash.
9. Advanced Inorganic Chemistry, Agarwal and Agarwal.
10. Advanced Inorganic Chemistry, Puri, Sharma, S. Naginchand.
11. Inorganic Chemistry, Madan, S. Chand.
12. Aadhunik Akarbanic Rasayan, A. K. Shrivastav & P. C. Jain, Goel Pub.
13. Uchchattar Akarbanic Rasayan, satya Prakash & G. D. Tuli, Shyamal Prakashan.
14. Uchchattar Akarbanic Rasayan, Puri & Sharma.
15. Selected topic in Inorganic Chemistry by Madan Malik & Tuli, S. Chand.

Shrivastav
28.06.21
(Dr. A.K. Shrivastav)

Prakash
28.06.2021
(Dr. C. Prakash)

Rajmani Patel
20.06.2021
(Dr. Rajmani Patel)

Agarwal
28.6.2021

Laga
28.06.2021
Tajpal Kumar

UNIT-I
HETEROCYCLIC COMPOUNDS

Classification and nomenclature, Structure, aromaticity in 5-membered and 6-membered rings containing one heteroatom; Synthesis, reactions and mechanism of substitution reactions of: Furan, Pyrrole (Paal-Knorr synthesis, Knorr pyrrole synthesis, Hantzsch synthesis), Thiophene, Pyridine (Hantzsch synthesis), Indole (Fischer indole synthesis and Madelung synthesis), Quinoline and isoquinoline, (Skraup synthesis, Friedlander's synthesis, Knorr quinoline synthesis, Doebner- Miller synthesis, Bischler-Napieralski reaction, Pictet- Spengler reaction, Pomeranz-Fritsch reaction).

UNIT II

A. ORGANOMETALLIC REAGENT

Organomagnesium compounds: Grignard reagents formation, structure and chemical reactions.

Organozinc compounds: formation and chemical reactions.

Organolithium compounds: formation and chemical reactions.

B. ORGANIC SYNTHESIS VIA ENOLATES

Active methylene group, alkylation of diethylmalonate and ethyl acetoacetate, Synthesis of ethyl acetoacetate: The Claisen condensation. Keto-enol tautomerism of ethyl acetoacetate. Robinson annulations reaction.

UNIT-III
BIOMOLECULES

A. CARBOHYDRATES

Occurrence, classification and their biological importance. Monosaccharides: relative and absolute configuration of glucose and fructose, epimers and anomers, mutarotation, determination of ring size of glucose and fructose, Haworth projections and conformational structures; Interconversions of aldoses and ketoses; Killiani Fischer synthesis and Ruff degradation; Disaccharides – Structural comparison of maltose, lactose and sucrose. Polysaccharides – Elementary treatment of starch and cellulose.

B. AMINO ACIDS, PROTEINS AND NUCLEIC ACIDS

Classification and Nomenclature of amino acids, Configuration and acid base properties of amino acids, Isoelectric Point, Peptide bonds, Protein structure, denaturation/renaturation, Constituents of nucleic acid, DNA, RNA nucleoside, nucleotides, double helical structure of DNA.

Shankar
28.06.21
(Dr. Anka Tewari)

POCC
28.06.2021
(Dr. C. Bose)

Rajmani
20.06.2021
(Dr. Rajmani Patel)

Ad
28.6.2021

Lagna
28.06.2021
Tajinder Kumar

UNIT-IV

SYNTHETIC POLYMERS

- A. Addition or chain growth polymerization, Free radical vinyl polymerization, Ziegler-Natta polymerization, Condensation or Step growth polymerization, polyesters, polyamides, phenols- formaldehyde resins, urea-formaldehyde resins, epoxy resins and polyurethanes, natural and synthetic rubbers.
- B. **SYNTHETIC DYES**
Colour and constitution (Electronic Concept). Classification of Dyes. Chemistry of dyes. Chemistry and synthesis of Methyl Orange, Congo Red, Malachite Green, Crystal Violet, phenolphthalein, fluorescein, Alizarine and Indigo.

UNIT-V

- A. **INFRA-RED SPECTROSCOPY**
Basic principle, IR absorption Band their position and intensity, IR spectra of organic compounds.
- B. **UV-VISIBLE SPECTROSCOPY**
Beer Lambert's law, effect of Conjugation, Types of electronic transitions λ_{\max} , Chromophores and Auxochromes, Bathochromic and Hypsochromic shifts, Intensity of absorption Visible spectrum and colour.
- C. **NMR SPECTROSCOPY**
Basic principles of Proton Magnetic Resonance, Tetramethyl silane (TMS) as internal standard, chemical shift and factors influencing it; Spin – Spin coupling and coupling constant (J); Anisotropic effects in alkene, alkyne, aldehydes and aromatics, Interpretation of NMR spectra of simple organic compounds. ^{13}C MR spectroscopy: Principle and applications.

REFERENCE BOOKS

1. Organic Chemistry, Morrison and Boyd, Prentice-Hall.
2. Organic Chemistry, L. G. Wade Jr. Prentice Hall.
3. Fundamentals of Organic Chemistry, Solomons, John Wiley.
4. Organic Chemistry, Vol I, II, III S. M. Mukherjee, S. P. Singh and R. P. Kapoor, Wiley Easters (New Age).
5. Organic Chemistry, F. A. Carey, McGraw Hill.
6. Introduction to Organic Chemistry, Struiweisser, Heathcock and Kosover, Macmillan.
7. Acheson, R.M. Introduction to the Chemistry of Heterocyclic compounds, John Wiley & Sons (1976).
8. Graham Solomons, T.W. Organic Chemistry, John Wiley & Sons, Inc.
9. McMurry, J.E. Fundamentals of Organic Chemistry, 7th Ed. Cengage Learning IndiaEdition, 2013.
10. Kalsi, P. S. Textbook of Organic Chemistry 1st Ed., New Age International (P) Ltd. Pub.
11. Clayden, J.; Greeves, N.; Warren, S.; Wothers, P.; Organic Chemistry, Oxford University Press.

Ashwini
28.06.21
(Dr. Asha Tejani)

POCC
28.06.2021
(Dr. C. Bose)

Rajmani
20.06.2021
(Dr. Rajmani Patel)

As
28.6.2021

Lagna
28.06.2021
Tajul Kuman

UNIT-I

QUANTUM MECHANICS-I

Black-body radiation, Planck's radiation law, photoelectric effect, Compton effect. Operator: Hamiltonian operator, angular momentum operator, Laplacian operator, postulate of quantum mechanics, eigen values, eigen function, Schrodinger time independent wave equation, physical significance of ψ & ψ^2 , application of Schrodinger wave equation to particle in a one dimensional box, hydrogen atom (separation into three equations) radial and angular wave functions.

UNIT-II

A. QUANTUM MECHANICS-II

Quantum Mechanical approach of Molecular orbital theory, basic ideas-criteria for forming M.O. and A.O., LCAO approximation, formation of H_2^+ ion, calculation of energy levels from wave functions, bonding and antibonding wave functions, Concept of σ , σ^* , π , π^* orbitals and their characteristics, Hybrid orbitals- sp , sp^2 , sp^3 Calculation of coefficients of A.O.'s used in these hybrid orbitals.

Introduction to valence bond model of H_2 , comparison of M.O. and V.B. models. Huckel theory, application of Huckel theory to ethene, propene, etc.

UNIT III

SPECTROSCOPY

Introduction: Characterization of Electromagnetic radiation, regions of the spectrum, representation of spectra, width and intensity of spectral transition, Rotational Spectrum of Diatomic molecules. Energy levels of a rigid rotor, selection rules, determination of bond length, qualitative description of non-rigid rotator, isotopic effect.

Vibrational Spectroscopy: Fundamental vibration and their symmetry vibrating diatomic molecules, Energy levels of simple harmonic oscillator, selection rules, pure vibrational spectrum, determination of force constant, anharmonic oscillator

Raman spectrum: Concept of polarizability, quantum theory of Raman spectra, stokes and antistokes lines, pure rotational and pure vibrational Raman spectra. Applications of Raman Spectra.

Electronic Spectroscopy: Basic principles, Electronic Spectra of diatomic molecule, Franck-Condon principle, types of electronic transition, application of electronic spectra.

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UNIT-IV

ELECTROCHEMISTRY-I

- A. Electrolytic conductance: Specific and equivalent conductance, measurement of equivalent conductance, effect of dilution on conductance, Kohlrausch law, application of Kohlrausch law in determination of dissociation constant of weak electrolyte, solubility of sparingly soluble electrolyte, absolute velocity of ions, ionic product of water, conductometric titrations.
- B. Theories of strong electrolyte: limitations of Ostwald's dilution law, weak and strong electrolytes, Elementary ideas of Debye – Huckel - Onsager's equation for strong electrolytes, relaxation and electrophoretic effects.
- C. Migration of ions: Transport number, Determination by Hittorf method and moving boundary method, ionic strength.

UNIT-V

ELECTROCHEMISTRY-II

- A. Electrochemical cell and Galvanic cells – reversible and irreversible cells, conventional representation of electrochemical cells, EMF of the cell and effect of temperature on EMF of the cell, Nernst equation Calculation of ΔG , ΔH and ΔS for cell reactions.
- B. Single electrode potential : standard hydrogen electrode, calomel electrode, quinhydrone electrode, redox electrodes, electrochemical series
- C. Concentration cell with and without transport, liquid - junction potential, application of concentration cells in determining of valency of ions, solubility product and activity coefficient
- D. Corrosion-types, theories and prevention

REFERENCE BOOKS

1. Physical chemistry, G.M.Barrow. International Student Edition McGraw Hill.
2. University General Chemistry, CNR Rao, Macmillan.
3. Physical Chemistry R.A.Alberty, Wiley Eastn.
4. The elements of Physical Chemistry P.W.Alkin,Oxford.
5. Physical Chemistry through problems, S.K.Dogra, Wiley Eastern.
6. Physical Chemistry B.D.Khosla.
7. Physical Chemistry, Puri & Sharma.
8. Bhoutic Rasayan, Puri & Sharma.
9. Bhoutic Rasayan, P.L.Soni.
10. Bhoutic Rasayan, Bahl & Tuli.
11. Physical Chemistry, R.L.Kapoor, Vol- I-IV.
12. Introduction to quantum chemistry,A.K.Chandra,Tata McGraw Hill.
13. Quantum Chemistry,Ira N.Levine, Prentice Hall.

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B.Sc. Part- III

PRACTICAL

Max. Marks-50

INORGANIC CHEMISTRY

Gravimetric analysis:

- Estimation of nickel (II) using Dimethylglyoxime (DMG).
- Estimation of copper as CuSCN
- Estimation of iron as Fe₂O₃ by precipitating iron as Fe(OH)₃.
- Estimation of Al (III) by precipitating with oxine and weighing as Al(oxine)₃ (aluminium oxinate).
- Estimation of Barium as BaSO₄

Inorganic Preparations:

- Tetraamminecopper (II) sulphate, [Cu(NH₃)₄]SO₄.H₂O
- Cis and trans K[Cr(C₂O₄)₂. (H₂O)₂] Potassium dioxalatodiaquachromate(III)
- Tetraamminecarbonatocobalt (III) ion
- Potassium tris(oxalate)ferrate(III)/ Sodium tris(oxalate)ferrate(III)
- Cu(I) thiourea complex, Bis (2,4-pentanedionate) zinc hydrate; Double salts (Chrome alum/ Mohr's salt)

ORGANIC CHEMISTRY

1. Preparation of organic Compounds

- Acetylation of one of the following compounds: amines (aniline, o-, m-, p- toluidines and o-,m-, p-anisidine) and phenols (β-naphthol, vanillin, salicylic acid)
- Benzoylation of one of the following amines (aniline, o-, m-, p- toluidines and o-, m-, panisidine) and one of the following phenols (β-naphthol, resorcinol, p cresol) by Schotten-Baumann reaction.
- Bromination of any one of the following: a. Acetanilide by conventional methods b. Acetanilide using green approach (Bromate-bromide method)
- Nitration of any one of the following: a. Acetanilide/nitrobenzene by conventional method b. Salicylic acid by green approach (using ceric ammonium nitrate).
- Reduction of p-nitrobenzaldehyde by sodium borohydride.
- Hydrolysis of amides and esters.
- Semicarbazone of any one of the following compounds: acetone, ethyl methyl ketone, cyclohexanone, benzaldehyde.
- Benzylisothiuronium salt of one each of water soluble and water insoluble acids (benzoic acid, oxalic acid, phenyl acetic acid and phthalic acid).
- Aldol condensation using either conventional or green method.

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- Benzil-Benzilic acid rearrangement.
- Preparation of sodium polyacrylate.
- Preparation of urea formaldehyde.
- Preparation of methyl orange.

The above derivatives should be prepared using 0.5-1g of the organic compound. The solid samples must be collected and may be used for recrystallization, melting point and TLC.

2. Qualitative Analysis Analysis of an organic mixture containing two solid components using water, NaHCO_3 , NaOH for separation and preparation of suitable derivatives.
3. Extraction of caffeine from tea leaves.
4. Analysis of Carbohydrate: aldoses and ketoses, reducing and non-reducing sugars.
5. Identification of simple organic compounds by IR spectroscopy and NMR spectroscopy. (Spectra to be provided).
6. Estimation of glycine by Sorenson's formalin method.
7. Study of the titration curve of glycine.
8. Estimation of proteins by Lowry's method.
9. Study of the action of salivary amylase on starch at optimum conditions.
10. Effect of temperature on the action of salivary amylase.

PHYSICAL CHEMISTRY

Conductometry

- Determination of cell constant
- Determination of equivalent conductance, degree of dissociation and dissociation constant of a weak acid.
- Perform the following conductometric titrations:
 - i. Strong acid vs. strong base
 - ii. Weak acid vs. strong base
 - iii. Mixture of strong acid and weak acid vs. strong base
 - iv. Strong acid vs. weak base
- To determine the strength of the given acid conductometrically using standard alkali solution.
- To determine the solubility and solubility product of a sparingly soluble electrolyte conductometrically
- To study the saponification of ethyl acetate conductometrically.

Potentiometry/pH metry

Perform the following potentio/pH metric titrations:

- i. Strong acid vs. strong base
- ii. Weak acid vs. strong base
- iii. Dibasic acid vs. strong base
- iv. Potassium dichromate vs. Mohr's salt
- v. Determination of pKa of monobasic acid

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UV/ Visible spectroscopy

- Verify Lambert-Beer's law and determine the concentration of $\text{CuSO}_4/\text{KMnO}_4/\text{K}_2\text{Cr}_2\text{O}_7$ in a solution of unknown concentration
- Determine the concentrations of KMnO_4 and $\text{K}_2\text{Cr}_2\text{O}_7$ in a mixture.
- Study the kinetics of iodination of propanone in acidic medium.
- Determine the amount of iron present in a sample using 1,10-phenanthroline.
- Determine the dissociation constant of an indicator (phenolphthalein).
- Study the kinetics of interaction of crystal violet/ phenolphthalein with sodium hydroxide.
- Study of pH-dependence of the UV-Vis spectrum (200-500 nm) of potassium dichromate.
- Spectral characteristics study (UV) of given compounds (acetone, acetaldehyde, acetic acid, etc.) in water.
- Absorption spectra of KMnO_4 and $\text{K}_2\text{Cr}_2\text{O}_7$ (in 0.1 M H_2SO_4) and determine λ_{max} values.

Note: Experiments may be added/deleted subject to availability of time and facilities

REFERENCE BOOKS:

1. Vogel, A.I. Quantitative Organic Analysis, Part 3, Pearson (2012).31
2. Mann, F.G. & Saunders, B.C. Practical Organic Chemistry, Pearson Education (2009)
3. Furniss, B.S.; Hannaford, A.J.; Smith, P.W.G.; Tatchell, A.R. Practical Organic Chemistry, 5th Ed., Pearson (2012)
4. Ahluwalia, V.K. & Aggarwal, R. Comprehensive Practical Organic Chemistry: Preparation and Quantitative Analysis, University Press (2000).
5. Ahluwalia, V.K. & Dhingra, S. Comprehensive Practical Organic Chemistry: Qualitative Analysis, University Press (2000)
6. Manual of Biochemistry Workshop, 2012, Department of Chemistry, University of Delhi.

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8 Hrs.

PRACTICAL EXAMINATION

M.M.50

Five experiments are to be performed.

1. **Inorganic** - Two experiments to be performed.

- Gravimetric estimation compulsory **08 marks.** (Manipulation 3 marks)
- Anyone experiment from synthesis and analysis **04 marks.**

2. **Organic** - Two experiments to be performed.

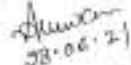
- Qualitative analysis of organic mixture containing two solid components.
Compulsory carrying **08 marks** (03 marks for each compound and two marks for Separation).
- One experiment from synthesis of organic compound (Single step)
04 marks.

3. Physical-One physical experiment **12 marks.**

4. Sessional **04 marks.**

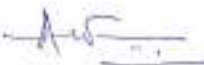
5. Viva Voce **10 marks.**

In case of Ex-Students one mark each will be added to Gravimetric analysis and Qualitative analysis of organic mixture and two marks in Physical experiment.


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B.SC.-III

PAPER- I (BOTANY)

(ANALYTICAL TECHNOLOGY PLANT PATHOLOGY, EXPERIMENTAL EMBRYOLOGY, ELEMENTARY BIOSTATISTICS, ENVIRONMENTAL POLLUTION AND CONSERVATION)

UNIT-I

Structure, Principle and applications of analytical instrumentation.

Chromatography technique, Oven, Incubator, Autoclave, Centrifuge, Spectrophotometer

UNIT-II

Plant Tissue culture techniques, growth media, totipotency, protoplast culture, somatic hybrids and cybrids, micropropagation, somaclonal variations, haploid culture.

Analytical techniques: Microscopy-Light microscope, Electron microscope

UNIT-III

General principles of plant pathology, general symptoms of fungal, bacterial and viral diseases, mode of infection] diseases resistance and control measures, plant quarantine. A study of epidemiology and etiology of following plant diseases.

Rust diseases of wheat, Tikka diseases of ground nut, Red rot of sugar can, Bacterial blight of rice, yellow vein mosaic of b hindi, Little Leaf of brinjal.

UNIT-IV

Introduction to pollution, green house gases, Ozone depletion, Dissolve oxygen, B.O.D., C.O.D.

Bio magnification, Eutrophication, Acid precipitation, Pytoremediation. Plant indicators, Biogeographical Zones of India, Concept of Biodiversity, CBD, MAB, National parks and biodiversity Hot spots, Conservation strategies, Red Data Book, IUCN threat categories, invasive species, endemic species. concept of sustainable development.

UNIT-V

ELEMENTARY BIOSTATISTICS:

Introduction and application of Biostatics, measure of central tendency-Mean, Median, Mode, measures of dispersal-Standard deviation, standard error.



Books Recommended:

Singh, RS, **Plant Diseases**, Oxford & IBH, New Delhi.

Pandey, BP, **Plant Pathology**, S. Chand Publishing, New Delhi

Sharma, PD, **Microbiology and Plant pathology**, Rastogi Publications, Meerut

Sharma PD, **Mycology and Phytopathology**, Rastogi Publications, Meerut

Singh JS, Singh SP and Gupta, SR, **Ecology Environmental Science and Conservation**, S. Chand Publishing, New Delhi

Sharma, PD. **Ecology and Environment**, Rastogi Publications, Meerut

Bhojwani, SS and Razdan, MK, **Plant Tissue Culture: Theory and Practices**, Elsevier

Sharma AK, **Text book of Biostatistics**, Discovery Publishing House Pvt.Ltd.

B.SC.-III
PAPER- II (BOTANY)
(GENETICS, MOLECULAR BIOLOGY, BIOTECHNOLOGY AND
BIOCHEMISTRY)

UNIT-I

Cell and cell organelles, organization and morphology of chromosomes, giant chromosomes, cell division, Mendel's laws, gene interactions, linkage and crossing over, chromosomal aberration, polyploidy, sex linked inheritance, sex determination, cytoplasmic inheritance, gene concept: cistron muton, recon.

UNIT- II

Nucleic acids, Structure and forms of DNA and RNA, DNA/RNA as genetic material, replication of DNA, biochemical and molecular basis of mutation, genetic code and its properties, mechanism of transcription and translation in prokaryotes, regulation of gene expression, Operon model.

UNIT- III

Recombinant DNA, Enzymes in recombinant DNA technology, cloning vectors (Plasmid, Bacteriophages, Cosmids, Phagemids), gene cloning, PCR, Application of Biotechnology; G.M.Plants, Monoclonal antibodies, DNA finger printing

UNIT- IV

Protein: Chemical composition, primary, secondary and tertiary structure of Proteins.

Carbohydrate: general account of monosaccharides, disaccharids and Polsaccharides

Fat: Structure and properties of fats and fatty acids, synthesis and breakdown.

UNIT- V

ENZYMES: Nomenclature and classifaction, components of enzymes, theories of enzyme action, enzyme kinetics (Michaelis-Menten constant), allosteric enzymes, isozymes, Abzymes. Ribozymes, factors affecting enzyme activity.

Handwritten signatures in blue ink.

Books Recommended:

Nelson, DL, Cox, MM, Lehninger Principles of Biochemistry, W.H. freeman and Company, New York, USA.

Cooper, GM, The Cell: A Molecular Approach, ASM Press & Sunderland, Washington, D.C. Sinauer Associates, MA.

Singh BD, Fundamental of Genetics, Kalyani Publication

Singh BD, Genetics, Kalyani Publication

Gupta, PK, Cell and Molecular Biology, Rastogi Publications, Meerut

Singh, BD, Biotechnology: Expanding Horizons, Kalyani Publications

Gupta, PK, Elements of Plant Biotechnology, Rastogi Publications, Meerut

Gupta, SN, concepts of Biochemistry, Rastogi Publications, Meeru

Jain, JL, Jain S, Jain, N, Fundamentals of Biochemistry, S Chand Publishing, New Delhi

B.Sc.- III (Botany)

Practical

1. Study of host parasite relationship pf plant diseases listed above.
2. Demonstration of preparation of Czapek's Dox medium and potato dextrose agar medium, sterilization of culture medium and pouring.
3. Inoculation in culture tubes and petriplates.
4. Gram Staining.
5. Microscopic examination of Curd.
6. Study of plant diseases as listed in the theory paper.
7. Biochemical test of carbohydrate and protein.
8. Instrumentation techniques

PRACTICAL SCHEME

TIME: 4 Hrs.

M.M.: 50

1. Plant Disease/Symptoms	10
2. Instrumentation techniques	05
3. Staining of Microbes	05
4. Tissue Culture techniques	05
5. Spotting	10
6. Project Work/ Field Study	05
7. Viva-Voce	05
8. Sessional	05

Hemchand Yadav Vishwavidyala, Durg (C.G.)

Zoology

B.Sc. Part III (2021-22)

Paper-I

ECOLOGY, ENVIRONMENTAL BIOLOGY: TOXICOLOGY, MICROBIOLOGY AND MEDICAL ZOOLOGY

Unit: I (Ecology)

- Aims and scopes of ecology
- Major ecosystems of the world-Brief introduction
- Population- Characteristics and regulation of densities
- Communities and ecosystem
- Bio-geo chemical cycles
- Air & water pollution
- Ecological succession

Unit: II (Environmental Biology)

- Laws of limiting factor
- Food chain in fresh water ecosystem
- Energy flow in ecosystem- Trophic levels
- Conservation of natural resources
- Environmental impact assessment

Unit: III (Toxicology)

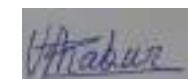
- Definition and classification of Toxicants
- Basic Concept of toxicology
- Principal of systematic toxicology
- Heavy metal Toxicity (Arsenic, Mercury, Lead, Cadmium)
- Animal poisons- snake venom, scorpion & bee poisoning
- Food poisoning

Unit: IV (Microbiology)

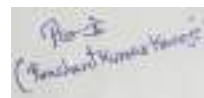

- General and applied microbiology
- Microbiology of domestic water and sewage
- Microbiology of milk & milk products
- Industrial microbiology: fermentation process, production of penicillin, alcoholic beverages, bioleaching.

Unit: V (Medical Zoology)

- Brief introduction to pathogenic microorganisms, Rickettsia, Spirochaetes, AIDS and Typhoid
- Brief account of life history & pathogenicity of the following pathogens with reference to man: prophylaxis & treatment
- Pathogenic protozoan's- Entamoeba, Trypanosome & Plasmodium
- Pathogenic helminthes- Schistosoma
- Nematode pathogenic parasites of man
- Vector insects



Anil Kumar



Anil Kumar

Zoology
B.Sc. Part III (2021-22)
Paper II

GENETICS, CELL PHYSIOLOGY, BIOCHEMISTRY, BIOTECHNOLOGY AND BIOTECHNIQUES

Unit: I (Genetics)

- Linkage & linkage maps, Sex Determination and Sex Linkage
- Gene interaction- Incomplete dominance & Codominance, Supplementary gene, Complementary gene, Epistasis Lethal gene, Pleiotropic gene and multiple alleles.
- Mutation: Gene and chromosomal mutation
- Human genetics: chromosomal alteration: Down, Edward, Patau, Turner and Klinefelter Syndrome Single gene disorders: Alkaptonuria, Phenylketonuria, Sickle cell anemia, albinism and colour blindness

Unit: II (Cell Physiology)

- General idea about pH & buffer
- Transport across membrane: Diffusion and Osmosis
- Active transport in mitochondria & endoplasmic reticulum
- Enzymes-classification and Action

Unit: III (Biochemistry)

- Amino acids & peptides- Basic structure & biological function
- Carbohydrates & its metabolism- Glycogenesis; Gluconeogenesis; Glycolysis; Glycogenolysis; Cose-cycle
- Lipid metabolism- Oxidation of glycerol; Oxidation of fatty acids
- Protein Catabolism- Deamination, transamination, transmethylation

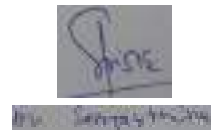
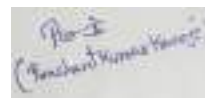
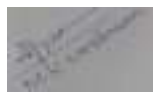
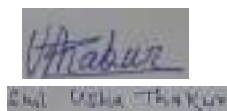
Unit: IV (Biotechnology)

- Application of Biotechnology
- Recombinant DNA & Gene cloning
- Cloned genes & other tools of biotechnology (Tissue culture, Hybridoma, Transgenic Animals and Gene library)

Unit: V (Biotechniques)

1. Principles & techniques about the following:

- (i) pH meter
- (ii) Colorimeter
- (iii) Microscopy- Light microscopes: Compound, Phase contrast & Electron microscopes
- (iv) Centrifuge
- (v) Separation of biomolecules by chromatography & electrophoresis



B. Sc. Part III (2021-22)

Zoology Practical

The practical work in general shall be based on syllabus prescribed in theory.

The candidates will be required to show knowledge of the following:

- Estimation of population density, percentage frequency, relative density.
- Analysis of producers and consumers in grassland.
- Detection of gram-negative and gram-positive bacteria.
- Blood group detection (A,B,AB,O)
- R. B. C. and W.B.C count
- Blood coagulation time
- Preparation of hematin crystals from blood of rat
- Observation of Drosophila, wild and mutant.
- Chromatography-Paper or gel.
- Colorimetric estimation of Protein.
- Mitosis in onion root tip.
- Biochemical detection of Carbohydrate, Protein and Lipid.
- Study of permanent slides of parasites, based on theory paper.
- Working principles of pH meter, colorimeter, centrifuge and microscope.

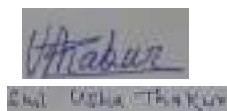
Scheme of marks distribution

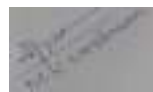
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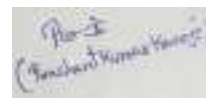
• Hematological Experiment	08
• Ecological Experiment: Grassland Ecosystem/ Population Density/Frequency/relative density	06
• Bacterial staining	05
• Biochemical experiment	06
• Practical based on Instrumentation (Chromatography/ pH meter/microscope/centrifuge.	05
• Spotting (5 spots)	10
7 Viva	05
8. Sessional	05

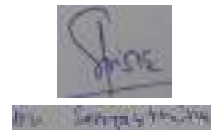

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