

B.A - I

Geography practical.

Program: B.A./B.Sc.	Class: I 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.	
Unit	Content of the Course	
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. Venkaramaiah, C. (1997): A Text Book of Surveying, Universities Press, Hyderabad.		
10. वर्मा, जे.पी. (2001) : प्रायोगिक भूगोल, ररतोपी पब्लिकेशन, मेदूर		
11. मिश्रा, आर.एन. एवं पी.के. वर्मा (2010) : प्रायोगिक भूगोल, रावत पब्लिकेशन, जयपुर		
12. विवाही, आर.सी. एवं सुधाकर त्रिपाठी (2000) : अभिनव प्रायोगिक भूगोल, प्रयाग पुस्तक भवन		
13. मोंक हाउस तथा मिलिकन्सन (अनुवाद प्रो. प्रेमचन्द्र अग्रवाल) : मानचित्र तथा आरेख, मध्य प्रदेश हिंदी इलाहाबाद ग्रंथ अकादमी भोपाल		
Suggested equivalent online course:		
1. eppp.inlibnet.ac.in 2. virtual lectures available on you tube		

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(Dr. Shree. Shinde)

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शासकीय नवीन महाविद्यालय
नूवा, जिला-बालोद (छ.प्र.)

B.A - II

Geography practical.

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.

5.5.19
(Dr. S. V. Das)

27.5.19



DR. Rishabh
Pracharya

प्राचार्य
शासकीय नवीन महाविद्यालय
भंगतुवा, जिला-बलौद (छ.ग.)

B.A - III

Geography Practical

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

अधिकतम अंक : 50

खण्ड (अ)

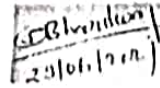
- मानचित्र पठन एवं निर्वचन 20
- इकाई -1. बैन्ड ग्राफ, हीदर ग्राफ, क्लासिफिकेशन ग्राफ, पवनारेख ।
- इकाई -2. भारतीय स्थलाकृतिक मानचित्र की व्याख्या प्रकार, वर्गीकरण धरतलीय मानचित्र के प्रकार एवं विप्लेपण, राष्ट्रीय एवं अन्तरराष्ट्रीय, भौतिक एवं सांस्कृतिक तत्त्वों के आधार पर विप्लेपण ।
- इकाई -3. उपग्रह 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 Raghuvswamy, 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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मंगचुवा, जिला-बालोद (छ.प्र.)

B.Sc - I , Chemistry Practical

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	12 marks
Two Titrations (Acid Bases, Redox and Iodo/Iodimetry/Complexometric titration)		
2. Detection of functional group in the given organic compound and determine its MPt/BPt.	OR	8 marks
Crystallization of any one compound as given in the prospectus along with the determination of mixed MPt.		
	OR	14 marks
Decolorisation of brown sugar along with sublimation of camphor/ Naphthlene.		
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.

- Dr. Alka Shrivastav,
Assistant Professor,
Govt. E.V.P.G. College, Korba
- Smt. Priyanka Tiwari,
Assistant Professor,
Govt. J.P. Verma P.G. College, Bilaspur
- Mr. Vijay Kumar Lahare,
Assistant Professor,
Govt. Lahiri P.G. College Chirimiri(C.G.)
- Dr. Rajmani Patel,
Assistant Professor,
Hemchand Yadav University, Durg
- Dr. A.K. Singh,
Professor,
Govt. V.Y.T. P.G. College Durg
- Dr. P.K. Singh,
Assistant Professor,
Govt. T.C.L. P.G. College Janjgir(C.G.)
- DR. P.K. Agnihotri,
Professor,
Govt. Yuganandam Chhattisgarh College Raipur(C.G.)
- Dr. B.D. Diwan,



- Chairman

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3/6/22

- Member

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3/6/22

- Member

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- Member

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03.6.22

- Member

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- Member

[Signature] प्राचार्य

- Member

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- Member

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B.Sc - II , Chemistry Practical

Hrs.5

B.Sc. II
PRACTICAL EXAMINATION

M.M.50

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.

4. Viva

12 marks

5. Sessional

10 marks

04 marks

In case of Ex-Students one marks will be added to each of the experiment.



for - *Surya*
प्राचार्य
काय नवीन महाविद्यालय
ग.बिला-बालोद (छ.ग.)

B.Sc.-II

Basu
20.6.2019

Divastu
24.6.19

Naidu

Surya

V. J. Kumar

B.Sc - III, Chemistry practical.

8 Hrs.

B.Sc. III
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.



for Swags

प्राचार्य

शासकीय नवीन महाविद्यालय
मंगचुवा, जिला-बासोद (छ.ग.)

28.06.21
(Dr. Anka Tiwari)

28.06.2021
(Dr. C. Beise)

20.06.2021
(Dr. Rajmani Patel)

28.6.2021

28.06.2021
Jagjit Kumar

B.Sc - I

Zoology practical.

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 vertebrates. Capable to enumerate biology of invertebrates. Capable to explore anatomy of animals. Able to understand cytological, histological and osteological configuration for animal life. Capable to explain 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	
	No. of classes
<p style="text-align: center;">Content</p> <p>Tentative list of practical/exercise : 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, Zoa larva, Bipinnaria larva. 3. Dissection/ demonstration/ clay model of - <ol style="list-style-type: none"> a) Pheretima : 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. 	<div style="border: 2px solid blue; border-radius: 50%; padding: 10px; display: inline-block;"> <p style="text-align: center; margin: 0;">30</p> <p style="text-align: center; margin: 0;">Govt. Naveen College</p> <p style="text-align: center; margin: 0; font-weight: bold;">MANGCHUWA</p> <p style="text-align: center; margin: 0;">Dist. Balod (C.G.)</p> </div> <p style="text-align: right; margin-top: 20px;"> <i>for -</i> प्राचार्य शासकीय नवीन महाविद्यालय मंगचुवा, जिला-बालोद (छ.प्र.) </p>

31-5-2023

B.Sc - II

Zoology Practical.

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 scolodon-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.

Time: 3:30hrs

Scheme of Practical Exam

• 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



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मंगचुवा, जिला-बालोद (छ.ग.)

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

Time: 3:30hrs

• 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



for - 
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मंगचुरा, जिला-बालोद (छ.ग.)

B.Sc - I

Botany Practical.

B.Sc. I (BOTANY)

PRACTICAL

Study of external (Morphogical) and internal (microscopic/anatomical) features of representative gerera given in the theory.

1. Algae: Gloeocapsa, Scytonema, Gloeotrichia, Volvox, Oedogonium, Vaucheria, Chara, Ectocarpus, Sargassum, Batrachospermum
2. Gram staining
3. Fungi: Albugo, Aspergillus, Peziza, Agaricus, Puccinia, Alternaria and Cercospora
4. Bryophyta: Riccia, Marchantia, Pellia, Anthoceros, Sphagnum, Funaria
5. Pteridophyta: Lycopodium, Selaginella, Equisetum, Marsilea.
6. Gymnosperm: Cycas, Pinus, Ephedra.

PRACTICAL SCHEME

TIME: 4 Hrs.

M.M. : 50

1. Algae/Fungi/Gram Staining	10
2. Bryophyta/Pteridophyta	10
3. Gymnosperm	10
4. Spotting	10
5. Viva-Voce	05
6. Sessional	05



(Dr. J.N. Verma)

Proff. & Head

Govt. D.B. Girls PG College

Raipur, (C.G.)

(Dr. Rekha Pimpalgaonkar)

Proff. & Head

Govt. N PG Science College

Raipur, (C.G.)

(Dr. Ranjana Shrivastava)

Proff. & Head

Govt. VYTPG Science College

Raipur, (C.G.)

(Mrs. Sanchal Moghe)

Govt. Bilasa Girls College, Bilaspur

(Mr. Shivakant Mishra)

(Mr. Sudheer Tiwari)

13.6.19

13.6.19

13/6/19

13.6.19

for -

प्राचार्य
शासकीय नवीन महाविद्यालय
मंगचुवा, जिला-बल्लोद (छ.ग.)

B.Sc - II Botany Practical.

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 O_2 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.

Amal
12.6.19

Ravi
13/6/19

Pranav
13.6.19

Arjun
13.6.19



Pranav
प्राचार्य
शासकीय नवीन महाविद्यालय
मंगचुवा, जिला-बालोद (छ.प्र.)

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

B.Sc.- III (Botany)

Practical

1. Study of host parasite relationship of 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



for - *Surya*
प्राचार्य

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