RASHTRASANT TUKDOJI MAHARAJ
NAGPUR UNIVERSITY, NAGPUR

SYLLABUS

GEOGRAPHY

M.A. FIRST YEAR

SEMESTER PATTERN
(Choice Based Credit System)

(Faculty: Social Science)

With Effect From: June, 2022

M.A. Geography Semester I Paper I

Subject: Gg-C101 Geomorphology

Marks: 100 **Credits: 04** **Periods: 60**

Prerequisite: Basic knowledge of geomorphology. Distribution of continents, oceans and geological history is required .

Course Objectives: The objectives of this course are to understand concepts and theories of geomorphology forces of earth which shape various landscapes.

Course Outcomes: After completion of the course the student comprehend the shape and distribution of landforms reasons behind their evolution.

Unit-I	**A) Nature and Scope of Geomorphology:** Definition of Geomorphology. Fundamental Concepts in Geomorphology. B) **Basic Theories in Geomorphology:** Wegener's Continental Drift ,Plate Tectonics, 1) WM Davis's Concept of Geomorphic Cycle	**(15 Periods)**
Unit-II	**A) Endogenic Forces:** Epeirogenic and Orogenic Movements. Compression. Tension, Folds, Faults **B) Denudational Processes:** Weathering. Mass Movement Erosion and Comparison of these processes	**(15 Periods)**
Unit-III	**Land Forms:** 1) Associated with Fluvial, Glacial, Arid and Coastal processes	**(15 Periods)**
Unit-IV	**A) Slope Morphology:** Slope Forms and Processes **B) Application in Geomorphology:** Human activities and Geomorphology	**(15 Periods)**

Reference Books:

1. Thornbury, W. D. (1960) Principles of Geomorphology John Wiley and Sons, New York.
2 Chorley, R. J. Schumim, S. A. and Sugden, D. E(1984) Geomorphology, Methuen London.
3 Kale VS and Gupta, A (2001) Introduction To Geomorphology. Orient Longman Calcutta
4 Savindra Singh (2002) Geomorphology Prayag Pustak Bhawan, Allahabad
5 Spark B. W (1972) Geomorphology, Longman, NewYork
6 Steers, A (1958) The Unstable Earth, Methuen,London
7. Oller, C. D. (1981) Tectonics and Landforms, Longman, London
8. Strahlar A Hand Strahler, A. N. (1992) Modem Physical Geography, John Wiley, New York
9. Wooldridge and Morgan: Geomorphology
10. Holmes Physical Geology
11. Fairbridge, R. W. (1988) Encyclopedia of Geomorphology. Reinholdts, New York

M.A. Geography Semester I Paper II

Subject: Gg-C102 Oceanography

Marks: 100 (80+20) **Credits: 04** **Periods: 60**

Salient Features

1 The aim of this course is to introduce the students with oceanography and significance of its study and to know properties and dynamics of oceanic water.

Utility

1. To help students to know the history and significance of Oceanography

Learning Objectives

1. To have the knowledge of physical and chemical properties of occans.
2. To know the types of oceanic currents and their distribution.

Prerequisites

1. Books, Maps, Globe, Models.
2. ICT

Unit-1: Oceanography and Its Field **(15 Periods)**

A) Definition, nature and scope of Oceanography
B) Significance of study of Oceanography

Unit-2: Surface Configuration of Ocean Floor and Resources **(15 Periods)**

A) Surface configuration of ocean floor.
Continental shelf, Continental slope, Abyssal plain and Trenches.
B) Ocean Resources: Biotic, Mineral and Energy Resources

Unit-3: Ocean Temperature & Salinity **(15 Periods)**

A) Oceanic Temperature: Factors affecting on ocean temperature
B) Distribution of oceanic temperature
C) Salinity of Ocean: Factors affecting on ocean salinity
D) Horizontal distribution of ocean salinity

Unit-4: Circulation of Oceanic Waters: **(15 Periods)**

A) Circulation of oceanic waters-waves, tides and currents.
B) Currents of Atlantic, Pacific and Indian Oceans.

Suggested Readings:

1) Anikouchine, W. A. and Sternberg.: The World Oceans- An Introduction to Oceanography, Englewood Cliffs, N. J.

2) Grald, S.: General Oceanography- An Introduction, John Wiley & Sons, New York.

3) Garrison, T. Oceanography, Wadsworth. USA.

4) King, C.A.M.: Beaches and Coasts, E. Arnold, London.

5) King, C.A. M.: Oceanography for Geographers E. Arnold, London.

6) Sharma, R. C. Vatel M.: Oceanography for Geographers. Chaitanya Publishing House

Allahabad.

7) Shepard, F.P.: Submarine Geology. Harper & Sons, New York.

8) Thurman, H. B.: Introductory Oceanography, Charles Webber E. Merrill publishing Co.

9) Weisberg. J. and Howard: Introductory Oceanography, McGraw-Hill Book, New York.

10) Manakari, M.P. and Mangnale, S.K. Oceanography, Aruna Prakashan, Latur

11) Siddharth K. 'An Introduction to Oceanography' Kisalaya Publications, New Delhi.

12) लाल डी.एस. 'समुद्र विज्ञान' शारदा पुस्तक भवन, इलाहबाद.

13) सिंग सविंद्र 'समुद्र विज्ञान' प्रवालिका पब्लिकेशन, इलाहबाद

M.A. Geography Semester I Paper III

Subject: Gg-E103 Geographical Thought (Elective)

Marks: 100 (80+20) **Credits: 04** **Periods: 60**

Prerequisite: Basic knowledge about development of geographical thought.

Course Objectives: The objectives of this course are to understand contributions of Greek, Roman Arab. Chinese and Indian scholars in development of geography and also to know the development of modern geography.

Course Outcomes: After completion of the course, the students get capabilities on understanding the development of geography from ancient to modern age and also come to know the contribution of geographers to the development of society.

Unit- I	Contributions of Greek, Roman, Arab, Chinese and Indian Scholars in development of geography Impact of Darwinian Theory on Geographical Thought	**(15 Periods)**
Unit-II	Founders of Modern Geography i) Alexander Von Humboldt. ii) Carl Ritter, iii) Friedrich Ratzel iv) Vidal de la Blache, v) Ellen Churchill Sample vi) Richard Hartshorne vii) Scheafer	**(15 Periods)**
Unit-III	Dualisms in Geographic Studies physical vs human, regional vs systematic qualitative vs quantitative, ideographic vs nomothetic Concept of Determinism and Possibilism, Areal Differentiation, Spatial Organization. Patterns and Processes. Explanation in Geography Paradigm Shift, Quantitative Revolution.	**(15 Periods)**
Unit-IV	Perspectives in Geography (Positivism, Behaviouralism, Humanism, Structuralism, Feminism and Postmodernism)	**(15 Periods)**

References:

1. Dixit, R.D. (1999). The Arts and Science of Geography. Integrated Readings, Prentice Hall of India Private Ltd. New Delhi.
2. Dickinson, RE (1969) The Makers of Modern Geography, Hall Book Depo. Bhopal Prentice-Hall of India New Delhi (English and Hindi)
3. Harvey, D. (1969) Explanation in Geography. London, Edward Arnold
4. Adams, Paul Steven Holescher and Karel Till (eds) (2001) Texture of Place Exploring Humanistic Geographies. University of Minnesota Press, Minneapolis.
5. ArildHolf-Hensen (1999) Geography History and Concepts, Sage Publications, London.
6. Suja Edward (1989) Postmodern Geographies verso, London Reprinted 1997 Rawat Publication, Jaipur and New Delhi
7. KapurAnu (ed.) (2001): Indian Geography - Voice of Concern Concept Publishing Company New Delhi.

8. Peet, Richard (1998) Modem Geographical Thought. Blackwell, Oxford.
9. Braithwaite EB (1960) Scientific Explanation. Harper Torch Books, New York.
10. Bunge, W (1979) Fred K Shaeffer and the Science of Geography, Annals. Association of American Geographers, 69, 128-32.

Subject: Gg-E104 Political Geography (Elective) Semester I

Paper- III

Marks: 100 (80+20) **Credits: 04** **Periods: 60**

Salient Features

1. The aim of this course is to introduce the students with fundamentals of Political Geography.

Utility

1. To understand the geopolitics, its significance, and international relations.

Learning Objectives

1. To provide in depth knowledge about political geography
2. To prepare students for various competitive examinations

Pre-requisites

1. Books, Maps, Globe. Models
2. ICT

Unit-1:	Introduction A. Definition. Nature and Scope of Political Geography B. Approaches to the Study of Political Geography	15 Periods
Unit-2:	Geographic Elements of State A. Physical Elements and the State B. Economic Elements and the State	15 Periods
Unit-3	Themes in Political Geography A. State. Nation and Nation-State (Meaning. Emerging Factors and Difference) B. Frontiers and Boundaries (Meaning, Classification and Difference)	15 Periods
Unit-4	Global strategic Views A. Concept of Geopolitics	15 Periods

B. The Views of Mackinder's Heartland Theory and Spykman's Rimland Theory

Suggested Readings:

1) Alexander, L.M.: World Political Patterns

2) De Blij, H.J. and Glassner, Matrin: Systematic Political Geography

3) Dikshit. R.D.: Political Geography

4) Sukhwal, B.L. : Modem Political Geography of India.

5) Taylor, B.L.: Political Geography

6) Pounds N.J.G.: Political Geography

7) John, R. Short: An Introduction of Political Geography

8) Moddie, A.E.: Geography Behind Politics

9) Prescott, J.R.V.: The Geography of Frontiers and Boundaries

10) Deshpande C.D. : India - A Regional Interpretation

11) Panikkar K.M.: Geographical Factors in Indian History

12) Gulave: Rajakiy Bhugol

13) Bhagvat A. V. Rajakiy Bhugol

M.A. Geography Semester I Paper IV

Subject: Gg-E105 Biogeography

Marks: 100 (80+20) **Credits: 04** **Periods: 60**

Prerequisite: Basic knowledge about scope, development and growth of biogeography.

Course Objectives: The objectives of this course are to understand the development of the branch of biogeography and also to know the development of man-environment relationship. To disclose the different types of evidence and records of environmental changes.

Course Outcomes: After completion of the course, the students get capabilities on understanding the development of biogeography. Understand man- environment relationship. Learn about different biogeochemical cycles. Get inside into the distribution of forests worldwide. Understand the importance of conservation of different biotic and abiotic resources.

BIOGEOGRAPHY (Core)

Unit-I Biogeography - Development and scope. Biosphere- definition, nature and composition. Environment, Habitat and Plant-animal association **(15 Periods)**

Unit-II Biogeochemical cycles- the hydrological cycle, the carbon cycle, the oxygen cycle, the nitrogen cycle, the phosphorus cycle and the sediment cycle. World distribution of forests; National Forest Policy of India; Conservation of Biotic Resources **(15 Periods)**

Unit-III Ecosystem- Meaning, types, components and functioning of ecosystem, Evolution of living organism and factors influencing their distribution on the earth, Biomes- Meaning and types **(15 Periods)**

Unit-IV Bio-geographical realms; Zoogeography and its Environmental Relationship, Palaeobotanical and Palaeo climatological records of environmental change in India. **(15 Periods)**

Recommended Readings:

1. Agarwal, D.P. (1992). Man and Environment in India Through Ages, Book & Books.

2. Bradshaw, M.J. (1979), Earth and Living Planet, ELBS, London. 3. Cox. C.D. and Moore, P.D. (1993), Biogeography: An Ecological and Evolutionary Approach (Fifth Edition), Blackwell.

4. Gaur, R. (1987), Environment and Ecology of Early Man in Northern India, R.B. Publication Corporation, New Delhi.

5. Hoyt, J.B. (1992), Man and the Earth, Prentice Hall, U.S.A.

6. Huggett, R.J. (1998), Fundamentals of Biogeography, Routledge, U.S.A.

7. Illics, J. (1974), Introduction to Zoogeography, Mcmillian, London.

8. Khoshoo, T.N. and Sharma, M. (eds.) (1991). Indian Geosphere-Biosphere. Har-Anand

9. Lapedes, D.N. (ed.) (1974). Encyclopedia of Environmental Science, McGraw Hill. Publication, Delhi.

10. Mathur. H.S. (1998). Essentials of Biogeography. Anuj Printers, Jaipur.

11. Pears. N. (1985), Basic Biogeography. 2nd ed. Longman, London.

12. Simmon, L.G.(1974), Biogeography, Natural and Cultural, Longman, London.

13. Tivy, J. (1992), Biogeography: A Study of Plants in the Ecosphere, 3rd Edition. Oliver and Boyd, U.S.A.

Subject: Gg-E106 Soil Geography (Elective) Semester I

Paper- IV

Marks: 100 (80+20) **Credits: 04** **Periods: 60**

Salient Features

1. The aim of this course is to introduce the students with various aspects of soil like formation, types, properties, soil testing, conservation etc.

Utility

1. To help students to learn the skills of soil testing and understand fertility

Learning Objectives

1. To have the knowledge of physical and chemical properties of soil.

2. To know the types of soils, their formation, and fertility levels.

Prerequisites

Unit-1:	Introduction	15 Periods
	A) Definition, scope and composition of soil.	
	B) Soil as a component of geography.	
Unit-2:	Soil Formation and types	15 Periods
	Process of soil formation	
	Factors (biotic and abiotic) affecting soil formation	
	Type of Indian Soils	
Unit-3	Soil Testing and Biogeochemical Cycles	15 Periods
	A) Procedure and importance of soil testing	
	B) Biogeochemical cycles (any three)	
	Carbon Cycle	
	Nitrogen Cycle	
	Phosphorous Cycle	
	Sulphur Cycle	
	Potassium Cycle	

Unit-4	Soil Pollution and Conservation	15 Periods

A) Causes of soil pollution and degradation

B) Methods and importance of soil conservatio

suggested Readings:

1) Backman, H.O and Brady. N.C.: The nature and properties of soil. Me Millan New York. 1960.

2) Bennet, Hugh H.: The Geography of soils. MeGraw Hill. New York.

3) Clark G.R.: Study of the soil in the field. Oxford University Press, Oxford. 1957

4) Govinda Rajan,S.V. and Gopala Rao.H.G.: Studies on soil of India. Vikas Publication New Delhi, 1978

5) Partiram. Brajendra N.S.. Azad Thakur & T. Ramesh: Soil Testing and Analysis (Plant. Water& Pesticide Residues). Published by new India Publishing Agency, New Delhi.

6) F.J.Stevenson & M Acole(2015); Cycle of Soil, Published by Wiley India. Delhi.

7) Rajendra Prasad, James F. Power (2014): Soil fertility management for sustainable Agriculture, Special India Edition.

8) U. Thapa & P. Tripathy (2010): Organic farming in India(Problems & Prospects). Agrotech Publication Academy Udaipur.

Semester-I

PAPER-V (1.P-1)

Semester Practical Examination Marks: 80 **Time- 4 hours**

Internal Assessment Marks: 20

PRACTICAL-I (Core)

Pre – requisite: Basic knowledge of landforms goemorphological features. The knowledge about graph and map preparation is required for this paper

Course Objectives: The objective of this course are to understand, Analysis, calculation and construction of graphs and maps about geomorphological elements.

Course Outcomes: After completion of the course the student get capabilities and skill on Morphometric measurement, Slope analysis, Drainage basin analysis and construction of geomorphological diagrams and graphs.

Mode of Assessment

1. Tutorial examination
2. Home assignments
3. Field studies
4. Mid – term practical examination
5. End – term practical examination

1. Morphometric measurement
(A) Graphical methods. (10 Marks)
i) Serial Profile
ii) Superimposed Profile
iii) Projected Profile
iv) Composite Profile
v) Longitudinal Profile
vi) Transverse Profile

(B) Slope analysis by using the following methods. (15 Marks)
i) Went worth's method
ii) Raisz and Henry's method.
iii) G. H. Smiths method

(C) Drawing and interpretation of following graphs. (10 Marks)
i) Hypsographic curve.
ii) Clonographic curve
iii) Altimetric Frequency graph
iv)Area Height Diagram

(D) Drainage basin analysis (15 Marks)
1. Determination of stream order
2. Stream length and determination of basin area
3. Drainage density ant texture of topography
4. Slope gradient of drainage basin

(E) Preparation of block diagram from the following relief features. (10 marks)
I) Mountain
ii) River Course

(F) Viva (10 Marks)

(G) Practical Record (10 Marks)

Internal Assessment:
Test Exam (20 Marks)

Note- The batch of Practical Class should not be exceeding 10 (Ten) Students.

Reference Books:

1. King, C. A.M (1966): Techniques in Geomorphology, Edward Arnold, London

2. Monkhouse, F. J. and Wilkinson, H. R., (1976). Maps and Diagrams, Methuen & Co.

3. Savindra Singh (2002): Geomorphology, Prayag Pustak Bhawan, Allahabad

4. Miller, Austin (1953): The skin

M.A. Geography Semester-I
PAPER-VI (1.P-2)

Semester Practical Examination Marks: 80 **Time- 4 hours**
Internal Assessment Marks: 20

Pre-requisite: Basic knowledge about elements of maps and construction of maps. The knowledge about physicals and cultural features is required for this paper.
Course Objectives: The objectives of this course are to understand, calculation, construction and interpretation of topographical maps.
Course Outcomes: After completion of the course the student, get capabilities and skills on construction and interpretation of topographical maps and identified the physical and cultural features of on the map.
Mode of Assessment
1. Tutorial examination
2. Home assignments
3. Field studies
4. Mid-term practical examination
5. End-term practical examination

Unit – I **Study of S.O.I. Topographical Maps** **(30 Periods)**

1. Indexing and conventional signs and symbols (OS)
2. Grid references. **(30 Marks)**
3. Locational and Relief aspects of the area
a. Latitudinal & Longitudinal extension **b.** Contour interval
c. Maximum and Minimum heights

1.Marginal Information,
2.Patterns of Relief
a. Distribution of Spot heights, benchmarks, Trigonometrically Points etc.
b. Types of Slopes (convex, concave, uniform etc.) **c**. Major landforms
from contour patterns
3. **Patterns of Drainage network**
a. Types-trellis, dendritic, radial, etc. **b**. Streams with water, without water. **c.**
Influence of relief on drainage
4**. Patterns of Vegetation.**
a. Types of vegetation **b**. Association of relief and drainage **c**. Reserved
Forest and Protected Forest
5. **Patterns of Settlements.**
a. Types, amenities, facilities and communication, etc.
b. Distribution, relative size, relative distance (dispersed, nucleated etc.)
6. **Patterns in Land Use**
a. Occupation, Agriculture, mining etc. areal distribution, **b.** Transportation and Communication,**c.** Irrigation, **d**. impact of physical landscape.
(Note: Teachers should select Topographical maps from plains, plateaus and mountains regions of India)

Unit-II	Basics of computer system: Application in geographical studies Theoretical aspect of computer system Preparation of thematic Graphs by computer	**(30 Periods)** **(30 Marks)**

Reference Books:

1. Monkhouse F.X.J. and Wilkinson H. R. (1971), Maps and Diagrams, London
2. Ramamurthy, K. (1982): Map interpretation, Madras
3. Petrie N. (1992), Analysis and Interpretation of Topographical Maps. Orient Longman Limited Calcutta.
4. Singh R. L. (1997), Elements of Practical Geography, Kalyan Publishing, New Delhi
5. Meux A. H. (1960), Reading Topographical Maps.University of London Press Limited
6. Jones P. A. (1968), Fieldwork in Geography. Longmans, Green and Company Limited
7. Archer J. E and Dalton T. H. (1968), Fieldwork in Geography B.T. Batsford Limited London
8. Wheeler K.S. Ed (1970), Geography in the field. Blond Educational, London.
9. Gupta, K. K. and Tyagi, V. C. (1992): Working with maps, Survey of India Publication, Dehradun.