

Gondwana University, Gadchiroli
Master of Arts (Choice Based Credit System Semester Pattern)
M. A. Geography

SEMESTER I

S.No.	Theory Paper	Teaching Scheme (Hrs/Week)	Examination Scheme						
			Duration Hrs	Max Marks		Total Marks	Min. Passing Marks		
		Theory / Practical		External TH Marks (Univ)	Practical / Internal Marks		External TH Marks	Practical /Internal Marks	Total
1	Paper – I - Core subject (History of Geographical Thoughts)	5	3	80	20	100	32	8	40
2	Paper - II- Core subject (Oceanography)	5	3	80	20	100	32	8	40
3	Paper - III- Core subject (Climatology)	5	3	80	20	100	32	8	40
4	Paper - IV (Practical I)	10	6	0	100	100	0	40	40
Total		25	12	240	100/60	400	96	64	160

SEMESTER II

S.No.	Theory Paper	Teaching Scheme (Hrs/Week)	Examination Scheme						
			Duration Hrs	Max Marks		Total Marks	Min. Passing Marks		
		Theory / Practical		External TH Marks (Univ)	Practical / Internal Marks		External TH Marks	Practical /Internal Marks	Total
1	Paper - I - Core subject (Research Methodology)	5	3	80	20	100	32	8	40
2	Paper - II - Core subject (Geomorphology)	5	3	80	20	100	32	8	40
3	Paper - III- Core subject (Geography of Resources)	5	3	80	20	100	32	8	40
4	Paper - IV(Practical II)	10	6	0	100	100	0	40	40
Total		25	12	240	100/60	400	96	64	160

SEMESTER III

S.No.	Theory Paper	Teaching Scheme (Hrs/Week)	Examination Scheme						
			Duration Hrs	Max Marks		Total Marks	Min. Passing Marks		
		Theory / Practical		External TH Marks (Univ)	Practical / Internal Marks		External TH Marks	Practical /Internal Marks	Total
1	Paper - I - Core subject (Geo. Of Manufacturing & Transport)	5	3	80	20	100	32	8	40
2	Paper - II - Core subject (Agriculture Geo.)	5	3	80	20	100	32	8	40
3	Paper - III – Elective Subject i(Population Geography) iii(Geography of tourism) iii (Bio- Geography)	5	3	80	20	100	32	8	40
4	Paper - IV(Practical III)	10	6	0	100	100	0	40	40
Total		25	12	240	100/60	400	96	64	160

SEMESTER IV

S.No.	Theory Paper	Teaching Scheme (Hrs/Week)	Examination Scheme						
			Duration Hrs	Max Marks		Total Marks	Min. Passing Marks		
		Theory / Practical		External TH Marks (Univ)	Practical / Internal Marks		External TH Marks	Practical /Internal Marks	Total
1	Paper - I - Core subject (Geography of Settlement)	5	3	80	20	100	32	8	40
2	Paper - II - Core subject (Social Geography)	5	3	80	20	100	32	8	40
3	Paper –III – Elective Subject- i (Regional Planning) ii (Environmental Geography) iii (Political Geography)	5	3	80	20	100	32	8	40
4	Paper - IV(Practical IV)	10	6	0	100	100	0	40	40
Total		25	12	240	100/60	400	96	64	160

PATTERN OF EXAMINATION (ALL SEMESTERS)

Theory :

Three theory papers of 80 marks each and of three hours duration will be conducted at the end of each semester.

Practical's :

- 1) One Practical examination of 100 marks and of six hours duration of each semester will be conducted at the end of the same semester.
- 2) Practical examinations of all four semesters will be conducted by internal and External examiners appointed by the University.

Internal Assessment:

- 1) Head of the department will carry out internal assessment of the students on the basis of evaluation report from the concerned teacher/ teachers, under the supervision of the principal of the college and will be done at the end of each semester.
- 2) Distribution of 20 marks of internal assessment is as under –
 - i) Class Attendance 05 marks
 - ii) Home Assignment 05 marks
 - iii) Group discussion / seminar/ Geographical activities etc. 10 marks

Pattern of Question Paper

Que 1 :	A) from unit I OR B) from unit II	Marks 20
Que 2 :	A) from unit III OR B) from unit IV	Marks 20
Que 3 :	A) from unit I B) from unit I OR C) from unit II D) from unit II	Marks 20 (10 mark each)
Que 4 :	A) from unit III B) from unit III OR C) from unit IV D) from unit IV	Marks 20 (10 mark each)

Rules and Regulation

1. There will be five periods per week for theory papers.
2. The batch of Practical class should not be exceeding 10 students.
3. The minimum passing marks of Theory paper and internal Assessment is 40
4. The minimum passing marks of Practical examination is 40
5. Marks will not be allotted to student if he found absent in study tour.

CERTIFICATE

Department of Geography

Name of College.....

This is to certify that this practical record is the Original practical works of

Shri/ Kumari/ Smt.

Class..... Semester..... During the academic year.

He/she has attended/ not attained the field work/ Study tour prescribed by the Gondwana
University Gadchiroli.

Signature of the teacher who taught the examinee.

1)

2)

Head of the Department

Master of Arts (Choice Based Credit System Semester Pattern)

M. A. Geography

Semester - I

PAPER – I (Core Subject)

Total Marks=100 Marks

Semester Examination =80 Marks

Internal Assessment= 20 Marks

History of Geographical Thoughts

Unit – I

The field of geography, its place in the classification of sciences; geography as a social science and natural science. Selected concepts in Philosophy of geography, distributions, relationship, interaction, areal differentiation and spatial organization.

Unit – II

Contributions of different scholars during ancient medieval and modern period. Geography In the 20th century : Status of Indian Geography, Future of Geography, relating to the development of geographic thought with special reference to changing views on man-environment relationship.

Unit – III

Dualism in geography; systematic and regional geography; physical and human geography; the myth and reality about dualism; Regional geography; Concept of region and regionalization and the regional method.

Unit – IV

Scientific explanations: routes to the scientific explanations (Inductive/Deductive); types of explanations; cognitive description; cause and effect; temporal; functional; ecological system. Laws, theories and models, the quantitative revolution.

Suggested Reading:

1. Albert, Ronald, Adams, John S, Gould, Peter (1971) Spatial Organisation, The Geographers View of the World, Prentice Hall. N.J
2. Ali, S.M. (1966): The geography of Puranas, People Publishing House
3. Amedeo, Douglas (1971): An Introduction to Scientific Reasoning in Geography, John Wiley U.S.A
4. Cole, J.P. and King, C.A.M. (1968): Quantitative Geography, John Wiley and sons. London
5. Dixit., R.D. :Political geography: A contemporary Policies
6. Dixshit, R.D.(ed)(1994): The Arts and Science of Geography-Integrated readings, Prentice Hall of India, New Delhi
7. Hartshorne, R(1959): Perspectives on Nature of geography, Rand McNally and Co.
8. Husain, M. (1984): Evolution of Geographical Thought, Rawat Publication, Jaipur
9. Kothari, C.R.(1993) : Research Methodology, Methods and Techniques Wiley Eastern Ltd, New Delhi
10. Mahmood Aslam (1977): Statistical methods in geographical studies, Rajesh Publication, New Delhi
11. Taylor, Peter(1977)Quantitative Methods in Geography, Houghton and Maffin co. Boston
12. Yeats ,M.(1974): An Introduction to quantitative Analysis in Human Geography, Mcgraw Hill Book Co, New York.
13. Minshull R. (1970): The Changing Nature of Geography, Hutchinson University Library London

Semester - I

PAPER – II (Core Subject)

Marks- 100

Semester Examination=80Marks

Internal Assessment=20 Marks

OCEANOGRAPHY

Unit – I

Nature and scope of oceanography, History of oceanography. Distribution of land and water; major features of ocean basins, continental margin and deep ocean basins.

Unit – II

Physical and chemical properties of sea water: distribution of Temperature and salinity of oceans and sea. Surface currents – currents of the Atlantic, Pacific and Indian Oceans, thermohaline, waves and tides.

Unit – III

Major Marine Environment, impact of human on Marine Environment, Marine Pollution – causes, Marine Deposits and formation of coral reefs.

Unit – IV

Applied Oceanography – Marine life – factor of Marine Environment, Marine Biozones, law of the sea; exclusive economic zone, Food and Mineral resources of the sea, Oceans and world Geopolitics.

Suggested reading:

Davis Recharj.A.(1986) Oceanography- An Introduction to the Marin Environment,W.M.C.Brown Iowa.

Garrison T (2001): Oceanography- An Introduction to marine science Books/Cole, Pacific Grove. USA

Savindra Singh: Oceanography

Lal : Oceanography

Duxbary C.A. and Cuxbary B : An introduction to the world's Oceans – C Brown Iowa 2nd ed, 1996.

Gross M Grant.: Oceanography a view of the earth, Prantice – Hall inc. New Jersy 1987.

Semester - II

Marks -100

Semester Examination=80Marks

Internal Assessment = 20 Marks

Paper III (Core Subject)

Climatology

Unit – I

Nature and scope of climatology and its relationship with meteorology, Composition, mass and structure of atmosphere.

Insolation: Heat balance of the earth, green house effect; vertical and horizontal distribution of temperature.

Atmospheric Pressure and winds, jet stream

Atmospheric moisture; humidity, evaporation, condensation, precipitation; Formation types, world pattern of rainfall.

Unit – II

Concept of air masses and atmospheric disturbances, ocean atmospheric interaction -- EL Nino, southern oscillation (ENSO) and La Nino, monsoon winds, Norwesters, Cyclones – Tropical and Temperate, Climate of India and its controls.

Unit – III

Climatic classification: Koppen's, Thornthwaite's and Genetics. Major climates of the world—tropical, temperate, polar desert and mountain climate.

Unit – IV

Climatic changes: Evidences, possible causes; global warming, environmental impacts and society's response.

Applied Geography : Impact of climate on Water Balance Study, Soil, Agriculture Activities, House Types and Health.

Suggested Reading :

1. Barry R.G.& R.J.Chorley : Atmosphere, weather and Climate. Methuaan & Col
2. Critchfield H.J.: General Climatology
3. Trewartha, G.T.: An Introdduction to Climate
4. Subrahmanyam, V.P : General Climatolgy Vol 3& 4 Heritage Publication New Delhi.
5. Savindra Singh: Climatology
6. Lal : Climatology

Semester - I

Marks- 100

PAPER – IV

PRACTICAL – I

1. Preparation and interpretation of the following maps and diagrams. (20 Marks – 2 Periods)
- (10 Marks)
- Group A**
- i. Equivariable
 - ii. Equipluves
 - iii. Frequency graph
 - iv. Rainfall dispersion diagram
 - v. Running mean
 - vi. Wind rose and compound wind rose
- Group B** (10 Marks)
- i. Water budget graph
 - ii. Climatograph
 - iii. Hythergraph
 - iv. Taylor's Climograph
 - v. Compound columnar graph
 - vi. Index of aridity and index of moisture
2. Study of Indian daily weather map and weather analysis. (15 Marks – 2Periods)
- Study and interpretation of at least four maps of India pertaining to –
- (a) S. W. Monsoon Season
 - (b) Summer season
 - (c) Transition period
 - (d) Cyclonic
3. Advanced techniques of spatial analysis:
- (a) **Remote sensing** (15 Marks –2 Periods)
- Definition of remote sensing. Remote sensing platforms and scanners. Electromagnetic radiation and physics of remote sensing. Arial remote sensing data products- Arial photographs, types, scales, displacement, parallax, aerial mosaics, radial line methods (graphical) (exercise).
- (b) **Geographical information system** (10 Marks – 2 Periods)
- Introduction to GIS. Fundamental of GIS- Spatial concepts and spatial relationships. Data models and structures- raster and vector. Integration procedure for spatial and non-spatial data. Scanning and digitization exercises. Editing and topology creation. Thematic mapping.
4. Excursion: (20 Marks – 2 Periods)
- Visit to any plain, plateau, hilly, coastal area, Mines, Forest, Tiger Project, National Park, Sanaturies, Dams, metorological centre and submit a report with photographs.
5. Viva Voce (10 Marks)
6. Practical Record (10 Marks)

Suggested Reading

- Aronoff S.(1989): Geographic Information System: Management Perspective, DDI Publication Ottawa.
- Burrough P.A. (1986): principles of Geographic information system for Land Resource Management, Oxford University press, New York.
- Barrett E.C. and L.F Curtis (1992): Fundamentals of Remote Sensing and Air photo Interpretation, McMillan New York
- Campbell J(1989): Introduction to Remote Sensing Guilford, New York
- Clendinning J (1985): Principal and use of Surveying Instruments 2nd edition Blackie A
- Curran (1985): Principals of Remote Sensing Longman, London
- Fraser Taylor D.R. (1991) Geographic In information system Pergamum Press oxford,1991
- Hord R.M.(1989): Digital Image processing of remotely sensed data Academic New York
- Hotine, Major M.(1935) : The re-triangulation of Great Britain Empire Survey Review
- Luder D.(1955): Aerial Photography Interpretation: Principals and Application Mc graw Hill, New York.
- Mark S.Monmoni er (1982): Computer assisted geography, Prentice Hall, Englewood Cliff, New Jersey.
- MaquireD.G.M.F Goodchild and D.W. Rhind (eds)(1991): geographic information system : Principals and Application Taylor& francis Washington.
- Mishra R.P and Ramesh,A (1986) : Fundamentals of cartography.
- Mcmillan Co.New Delhi
- Pal.S.K(1968): Statistics for Geoscientist_ Techniques and Application, Concept, New Delhi
- Peuquet D.Jand D.F. Marble (1990): Introductory teaching in Geographic Information system. Taylor& Fransis Washinton
- Pratt W.K. (1978): Digital Image Processing, Wiley, New York.
- Rao D.P(ed)(1998): Remote Sensing for Earth Resources, Association of Exploration Geophysicist,
- Star J and J Estes (1994); Geomorphiic Information system: An Introduction Prentice Hall Englewood Cliff, New Jers
- Thomas M. Lilles and and Ralph W Kefer,(1994): Remote Sensing and Image Interpretation John Wiley & son, New York.
- Nagtode P. M. & Lanjewar H.D. : Nakashashtra, Pimplapure Publication Nagpur.

Semester - II

PAPER – I (Core Subject)

Marks -100

Semester Examination=80 marks

Internal Assessment =20 marks

RESEARCH METHODOLOGY

Unit - I

Meaning, origin of research, research design, Types of research methods – Formulation of research problem – Objectives and hypotheses: testing of hypotheses.

Unit - II

Characteristics of geographical data – Measurement of data:– Primary and secondary data – Sources of data: traditional and modern – Data compilation. Primary data collection: census and sampling methods – Types of sampling – Spatial adaptation of sampling techniques – Data collection techniques through field work and questionnaires.

Unit - III

Data processing: classification and tabulation – Cartographic representation of data – Descriptive and inferential statistics – Functional and spatial interpretation of the results.

Unit - IV

Preparation of project report: basic heads- Introduction to the problem- Results of analysis- Summary of findings in the light of the hypotheses- Conclusion. Writing of references, Bibliography.

Suggested reading;

Mishra R.P: Research methodology

Bhandarkar: Research methodology in social science

Kothari : Research Methodogy

Nagode P. M. & Lanjewar H.D. : Nakashashtra, Pimlapure Publication Nagpur.

Semester - II

Marks-100

PAPER – II (Core Subject)

Semester Examination=80 Marks

Internal Assessment = 20 Marks

GEOMORPHOLOGY

Unit - I

Nature and scope of geomorphology, Geological structures and landforms. Uniformitarianism; multicyclic and polygenetic evolution of landscape; concept of threshold; environmental change – climatic change and geochronological methods- documentary evidence, artifacts, major horizons, dendrocronology, pollen, thermoluminescens.

Unit - II

Earth movements-epirogenic, orogenic and cymatogenic earth movements. Forces of crustal instability, isostacy, plate tectonics, seismicity, volcano city, orogenic structures with reference to the evolution of Himalayas.

Unit - III

Exogenic processes: Concept of gradation, agents and processes of gradation, causes, types of weathering, mass movement, erosional and depositional processes and resultant landforms and soil formation, slope evolution, down wearing, parallel retreat and replacement models.

Unit - IV

Geomorphic processes: dynamics of fluvial, glacial, Aeolian marine and karsts processes and resulting landforms; complexities in geomorphologic processes; Erosion surfaces-techniques of identification and correlation. Application of geomorphic mapping, terrain evaluation, land capability and land suitability, classification, urban geomorphology and geomorphic hazards.

Suggested Reading :

1. Chorley, R.G.(1972) Spatial Analysis In Geomorphology, Methuen, London
2. Dr, V.S.Kale & Abhijit Gupta: Introduction to Geomorphology
3. Garner H.F. (1974) : The origin of the Landscape- A synthese of Geomorphology, Oxford university Press London
4. Mitchell C.W.(1973): Terrain Evolution, Longman, London
5. Ollier C.D.(1979) : Weathering, Longman London.
6. Sharma. H.S.(Ed)(1980) " Perspective in Geomorphology, Concept, New Delhi
7. Singh Savindra (1998) Geomorphology, Prayag Publication, Allahabad
8. Skinner B.J. and peter S.C. (1995) The Dynamic Earth, John Willey, New York
9. Spark.B.W.(1960): Geomorphology Longman London
10. Naktode P.M., Sheikh J.A. & Dudhapachare Y.Y., Bhurupshashtra va Sagarvidnan.

Semester - II

Marks-100

PAPER – III (Core Subject)

Semester Examination=80 Marks

Internal Assessment = 20 Marks

Geography of Resource

Unit I :- Nature and scope of Geography of Resource, Significance of Resource, Concept of Resource, utilization of Resources; factors affecting on utilization of Resources classification of Resources.

Unit II :- Natural Resources – Renewable resources.

Land – a Resources, soil formation and composition, classification of soil, world soil distribution soil erosion, causes soil, conservation importance, water resources – distribution economic relation of man and water resources water conservation.

Unit III:- Mineral Resource – Importance of mineral Resource Type, characteristics, uses, world distribution, Iron ore, Manganese, Bauxite copper, Mica. Environmental effect of mineral production, conservation Power Resources – classification – coal, mineral oil, natural gas Hydro-Electricity.

Unit :- Priotic Resources –ocean as a resources, Animal resources, forest Resources – use of forest resources, type of forest, forest conservation man as a resources, distribution of Human resources problems of population and resources. Agriculture Resources –factors affecting on agriculture. Type of Agriculture, major crop wheat, Rice, corn, Tea, cotton sugarcane.

Reference :

- 1) Economic Geography – Alexander J.
- 2) Economic Geography – B. Agunachalam
- 3) Basic of Economic Geography – Boyce, Renold, Red.
- 4) Economic and commercial Geography - Dasgupta.
- 5) Economic and commercial Geography – R.S. Dube, R.L. Singh.
- 6) Economic Geography – H. Robinson
- 7) Economic Geography – Jones and Darkenwald
- 8) Economic Geography – Leong Cheng.
- 9) Geography of Resources – Balbir Negi.
- 10) Geography of Resources – M.P. Karan.
- 11) Geography of Resources – Dr. Kaushik.

Semester - II

Marks-100

PAPER – IV

PRACTICAL – II

1. Basics of computer system: Application in geographical studies. (10 Marks – 2 Periods)

Theoretical aspect of computer system

2. Study of topographical maps (15 Marks – 2 Periods)

Interpretation of maps: Topographical maps.

Aspects of Physical and Human Environment.

(Note: - Teachers should select Topographical maps from plains, plateaus, mountains and coastal regions of India.)

3. Measurement of area by graphical methods. (10 Marks – 2 Periods)

4. Morphometric measurement (45Marks – 4 Periods)

(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) Wentworth's method
- ii) Raisz and Henry's method
- iii) G. H. method

(C) Drawing and interpretation of following graphs. (10 Marks)

- i) Hypsographic curve
- ii) Altimetric Frequency graph
- iii) Area Height Diagram

(D) Drainage basin analysis (10 Marks)

- i) Determination of stream order
- ii) Stream length and determination of basin area
- iii) Drainage density and texture of topography

E) Viva (10 Marks)

F) Practical record (10 Marks)

Suggested Readings:

- Aronoff S.(1989): Geographic Information System: Management Perspective, DDI Publication Ottawa.
- Burrough P.A. (1986): principles of Geographic information system for Land Resource Management, Oxford University press, New York.
- Barrett E.C. and L.F Curtis (1992): Fundamentals of Remote Sensing and Air photo Interpretation, McMillan New York
- Campbell J(1989): Introduction to Remote Sensing Guilford, New York
- Clendinning J (1985): Principal and use of Surveying Instruments 2nd edition Blockie A
- Curran (1985): Principals of Remote Sensing Longman, London
- Fraser Taylor D.R. (1991) Geographic In information system Pergamum Press oxford,1991
- Hord R.M.(1989): Digital Image processing of remotely sensed data Academic New York
- Hotine, Major M.(1935) : The re-triangulation of Great Britain Empire Survey Review
- Luder D.(1955): Aerial Photography Interpretation: Principals and Application Mc graw Hill, New York.
- Mark S.Monmoni er (1982): Computer assisted geography, Prentice Hall, Englewood Cliff, New Jersey.
- MaquireD.G.M.F Goodchild and D.W. Rhind (eds)(1991): geographic information system : Principals and Application Taylor& francis Washington.
- Mishra R.P and Ramesh,A (1986) : Fundamentals of cartography.
Mcmillan Co.New Delhi
- Mitra R.P and Ramesh : Fundamentals of Geography revised Edition, Concept Publication, New delhi
- Monkhouse F.J (1971) Maps and Diagram, Methuen
- Negi, Balbir Singh (1995): Practical geography third revised edition Kedarnath and Ramnath, Meerut &Delhi
- Pal.S.K(1968): Statistics for Geoscientist_ Techniques and Application, Concept, New Delhi
- Peuquet D.Jand D.F. Marble (1990): Introductory teaching in Geographic Information system. Taylor& Fransis Washinton
- Pratt W.K. (1978): Digital Image Processing, Wiley, New York.
- Rao D.P(ed)(1998): Remote Sensing for Earth Resources, Association of Exploration Geophysicist, Hyderabad.
- Robinson, A.H et al (1995): Element of Cartography, John Wiley & Sons. USA
- Sandover,J. A.(1961): Plane Surveying Arnold
- Sarkar A.K.(1977): Practical geography: A systematic Approach. Oriental Longman, Calcutta
- Singh, R.L. and Dutt P.K. (1968): Elements of Practical Geography, Students Friends, Allahabad
- Star J and J Estes (1994); Geomorphic Information system: An Introduction Prentice Hall Englewood Cliff, New Jersey.
- Singh and Kanojiya (1972): Map work and practical Geography central Book depot, Allahabad
- Thomas M. Lilles and and Ralph W Kefer,(1994): Remote Sensing and Image Interpretation John Wiley & son, New York.
- Nagtode P. M. & Lanjewar H.D. : Nakashashtra, Pimplapure Publication Nagpur.

Semester – III

PAPER – I (Core Subject)

Marks-100

Semester Examination=80Marks

Internal Assessment=20 Marks

Geography of Manufacturing and Transport

Unit - I

Scope, content and recent trends in economic geography, relation of economic geography with economics, classification of economies sectors of economy (primary, secondary, tertiary).

Factors of location industries –physical, social, economic and cultural.

Unit - II

Classification of industries. Theories of industrial location-Weber, Loach, case studies of selected industries- Iron and steel. Oil refining and petrochemical, textile.

Unit - III

Modes of transportation, characteristics and relative significance. Transport cost , accessibility connectivity – network analysis. International, inter and intra regional, comparative cost advantages.

Unit - IV

Economic development of India, regional disparities, impact of green revolution on Indian economy, globalization and Indian economy.

Suggested Readings:

Alexander : Economic Geography

Derze. J and Sen, A (1966): India _Economic development and Social opportunity, Oxford University Press, New York

Hurst E (1974): transport geography- Comments and reading. McGraw Hill New York.

Mamoria,C.B.: Economic Geography

Rostov, W.W.(1960): The stages of economic Growth, Cambridge university press. London.

Sharma and Countino : Economic Geography.

Semester III
PAPER –II (Core Subject)

Marks-100

Semester Examination = 80 Marks

Internal Assessment= 20 Marks

AGRICULTURAL GEOGRAPHY

Unit - I

Nature, Scope, significance and development of Agriculture geography, Approaches to the study of agricultural geography; systematic and regional. Origin and dispersal of agricultural.

Unit - II

Determinants of agricultural land use- Physical, economic, social and technological. land use policy and planning. Selected agricultural concepts and their measurements, Cropping pattern, Crop concentration, Intensity of cropping, degree of commercialization, diversification and specialization, efficiency and productivity, Crop combination regions and agricultural development. Green Revolution- and White revolution with reference to India.

Unit - III

Theories of Agricultural Location based on several multi-dimensioned factors; Von Thune's theory of agricultural location and its recent modifications, Whittlesey's classification of agricultural regions, land use and capability.

Unit - IV

Contemporary issues: Food, Nutrition and hunger, Food security, drought and food security, food aid programmes, role of irrigation fertilizers, insecticides, Technological Know-How

Suggested readings:

Gregor, H.P(1970): geography of Agriculture Prentice Hall, New York

Grigg,D.B.(1974): The Agriculture system of the world, Cambridge University Press New York

Hartshone, T.N. and Alexander J.W (1998) Economic geography Prentice Hall, New York

Mannion, A.M. (1995) : Agricultural and environment change, , London ,Jon Wiley

Morgan W.B. and Norton, R.J.C(1995): Agricultural geography, mathuen, London

Morgon, W.B.(1978): Agricultural in the thirld world – A spatial analysis, west view Press, Boulder

Sauer, C.O(1969): Agricultural origin and Dispersal M.I.T press. Mass.

Singh, J.R.(1988): Agricultural geography, T ata McGraw Hill Publication, New Delhi

Tarrant, J.R.(1974) : Agricultural Geography, Wiley, New York

SEMESTER III

PAPER – III (Elective Subject Paper i)

Marks-100

Semester Examination=80Marks

Internal Assessment=20 Marks

POPULATION GEOGRAPHY

Unit I - I

Population geography : Scope and Objectives, development of population geography. Population geography and demography- Sources of population data, their level of reliability and problems of mapping of population data.

Unit - II

Population distribution : density and growth – Theoretical issues, classical and modern theories in population distribution and growth, world patterns and their determinants, India – Population distribution, density and growth, Concepts of under population and over population.

Unit - III

Population composition: age and sex, literacy and education, rural and urban, urbanization, occupational structure, population composition of India, population dynamics; Measurement of fertility and mortality. Migration: national and international Patterns.

Unit - IV

Population and development : resource region and levels of population and socio-economic development, population policies in developed and less developed countries, Human development index and its components, India's population policies.

Suggested reading:

Bogue, D.J.(1969); Principles in Demography, John Wiley, New York.

Bose, Ashish et al (1974); Population in India's Development(1947-2000), Vikas Publishing House, New Delhi

Census of India. India; A state Profile, 1991

Chandna, R.C.(2000): Geography of population; Concept, Determinants and Patterns, Kalyani Publishers, New Delhi.

Clark, John (1973): Population Geography. Pergamum Press, New York.

Crook, Nigel (1977): Principles of population and development Pergamum Press, New York.

Mamoria, C.B.(1981):India's population Problems, Kitab Mahal Delhi

Premi M.K (1991): India's population. Heading towards a Billion Publishing Corporation

Shrinivasan. K. (19980 Basin Demographic Techniques and application Sage publication, New Delhi

SEMESTER III

Marks-100

PAPER – III (Elective Subject Paper ii)

Semester Examination=80Marks

Internal Examination =20 Marks

GEOGRAPHY OF TOURISM

Unit - I

Basics of tourism. Definition of Tourism, factors influencing tourism, historical, natural, Socio-cultural and economic. Motivating factor for pilgrimages, leisure, recreation, elements of tourism.

Unit - II

Geography of tourism :- its spatial affinity, areal and locational dimensions comprising physical, cultural, historical and economic, Tourism types cultural, eco-ethno-coastal and adventure tourism, national and international tourism, globalization and tourism.

Unit - III

Indian tourism : regional dimensional of tourist attraction, evolution of tourism, promotion of tourism, infrastructure and support system – accommodation and supplementary accommodation, other facilities and amenities, Tourism circuits-short and longer detraction – Agencies and intermediacies – Indian hotel industry.

Unit - IV

Impacts of Tourism, Physical, economic and social and perceptual positive and negative impacts, Environmental laws and tourism- Current trends, spatial patterns and recent changes, Role of foreign capital and impact of Globalization on tourism.

Suggested reading;

C.Michell Hall: Tourism Planning, Policies and Relationship

C.Michell Hall: Tourism

Geogrey Wall, Alister Mathieun ; Tourism- Change, Impact and Opportunities

Stephen Page: transport and Tourism

Stephen Page: Eco- Tourism

Stephen Page, C Michall Hall: Managing urban Tourism

Sustainable Tourism ,A Geographical Perspective

Dr. P.M. Naktode and Dr. D.A. Pardhi :- Paryatan Bhoogol

SEMESTER III

PAPER – III (Elective Subject Paper iii)

Marks-100

Semester Examination=80Marks

Internal Examination =20 Marks

BIO GEOGRAPHY

UNIT – I - Nature and scope of Bio Geography – Biosphere and its characteristics, Environment habitat and plant animal association, Biome types. Meaning and functions of Soil formation and soil characteristics, Soil profile, soil fertility and productivity. Classification of Soil.

UNIT –II - Elements of Plant Geography – Plants Their evolution, grouping and importance. Environmental factors influencing plants and their distribution. Major vegetation types – Forest, grassland and desert vegetation and their distribution, plants succession in newly formed land forms from flood plains and glacial fore fields.

UNIT –III - Zoogeography - Animals – Environmental factors influencing their distribution, The Zoogeographical realms and types of animal Ecology – ecosystem and ecological Balance with reference to animals.

UNIT – IV – Man – Environment relationship -

Meaning and characteristic features of environment, use of environment by man. National forest policy of India, Conservation of Biotic resources.

Global warming and its consequences. Environmental degradation. Concept of conservation - with reference to soil, plants and animals.

Reference –

- 1) Biogeography – H. Robinson
- 2) Biogeography, Natural and Cultural – Strahler
- 3) Biogeography – A Study of Plants in the Ecospher – Tivy, Joy
- 4) One earth one failure – East West Press New Delhi
- 5) Environmental Pollution – N. Manivasakun.
- 6) Fundamentals of Biogeography – Huggett R. J.
- 7) Essential of Biogeography – H. S. Mathur
- 8) Man and Environment in India through ages – D. P. Agrawal.

- 1. Economic maps and Diagrams** (10 Marks – 2 Periods)
 1. Lorenz curve 2. Ergo graph 3. Triangular graph 4. Isochors and Isochrones 5. Simple and semi log graphs.
- 2. Population maps and Diagrams** (10 Marks – 2 Periods)
 1. Dependency ratio map 2. Isopleths of population potential 3. Demographic transition model
 4. Superimposed pyramid.5. natural replacement graph of population.
- 3. Cartographic methods** (30 Marks – 4 Periods)
(i) Agricultural geography and regional development and planning
 A) Index of concentration
 B) Index of diversification
 C) Index of crop –combination
 D) Agricultural efficiency
- 4. Field Work :** (30 Marks – 2 Periods)
 Visit to a field on some aspects of M. A. semester III theory paper (Agriculture Geography and writing of a **field work report.**
- (A) Collection of data , processing and tabulation of data- (10 Marks)
 (B) Writing of field work report (20 Marks)
- 5. Viva Vice** (10 marks)
6. Practical Record (10 Marks)

Semester - IV

PAPER –I (Core Subject)

Marks-100

Semester Examination=80marks

Internal Assessment = 20 marks

GEOGRAPHY OF SETTLEMENT

Unit - I

Nature, Scope and significance and development of settlement geography, Approaches to rural settlement geograph. Histogenesis of rural settlements, Spatio – temporal dimensions and sequent occupance. Defination and chacterstics of rural settlement in the fringe areas.

Unit - II

Type, forms and patterns of rural settlement cause and effect. Functional classification of rural service centre: their nature, Hierarchy and functions, rural-urban fringe e- structure, characteristics and function.

Unit - III

Social issues in rural settlements: Poverty, housing and shelter, deprivation and inequality, empowerment of woman, healthcare, rural-urban interaction. Environmental issues in total settlements: access to environmental infrastructure, water supply, sanitation, drainage, occupational health hazards.

Unit - IV

Cultural landscape element in rural settlement in different geographical environments with specific references of India. House types and field patterns. Origin, evaluation, size, socio – spatial structure of Indian villages. Rural development planning in India.

Suggested readings :

Singh R.Y : Geography of Settlements

Mondol, R.B.: Selltlemen Georaphy

Taylor: Urban Geography

Northam : Urban Geography

K.Siddarth& Mukherjee: urbanisation, system and process

Tiwari: Settlement Geography

Semester - IV

PAPER –II (Core Subject)

Marks-100

Semester Examination=80marks

Internal Assessment= 20marks

Unit - I

SOCIAL GEOGRAPHY

Nature and development and social geography, Philosophical bases of social geography – Positivist , Structuralist, radical, humanist, post – modern and post structuralist; social geography in the realms of social sciences.

Unit - II

Space and society, Understanding a society and its structure and process. Geographical bases of social formations, contribution of social geography to social theory, power relations and space.

Unit - III

Towards social geography of India. Social differentiation and region formation, evolution of socio – cultural regions of India bases of social region formation role of race, caste, ethnicity, religion and languages, India unity and diversity, social transformation and change in India.

Unit - IV

Social well-being : Concepts of social well-being, Physical quality of life, Human development : Measurement of Human development with social, economic and environmental indicators, Rural Urban deprivation in India with respect to health care : education and shelter; deprivation and discrimination issues relating to women and under prevailed groups : Patterns and bases of rural and urban society.

Suggested Reading :

Azzaudin Ahmad : Social Geography

Smith, David; Social geography; A Welfare Approach, Edward Arnold. 1977

Sopher ,David : An exploration of India, Corenell University,1980

Wankhede Deepak M.(2008): Socio-Economic Development of Scheduled Castes, Gautam Book centre Publication, New Delhi

Semester IV

PAPER –III (Elective Paper i)

Marks-100

Semester Examination=80 marks

Internal assessment =20 marks

REGIONAL PLANNING

Unit - I

Regional concept in geography, conceptual and theoretical framework, merits and limitations for application to regional planning and development, concept of space, area and locational attributes.

Types of regions; Formal and functional, uniform and nodal, single purpose and composite region, in the context of planning, regional hierarchy, special purpose regions.

Unit - II

Physical regions, resource regions, regional division according to variation in levels of socio-economic development, Special purpose regions – river valley regions

Unit - III

Approaching to delineation of different types of region and their utility in planning. Planning process – sectoral, Temporal and spatial dimensions, short – term and long term perspective of planning for a region's development and multi – regional plan in a national context. Indicators of development and their data sources, measuring levels of regional development and disparities.

Unit - IV

Concept of Multi-level planning : decentralized planning; People participation in the planning process, Panchayat Raj system, role and relationship Panchayat Raj, Institutions (Village Panchyat, Panchyat samitee and Zilla Parishad) and administrative structure (Village, Block and District). Regional development in India – Problems and prospect.

Suggested reading:

Bhat,L.S.(1973); Regional Planning in India, Statistical Publishing Society, Calcutta

Bhat, L.S. et.al.(1976); Micro-level Planning: a case study of Karnal Areas, Harayana K.B.Publications New Delhi

Friedman J and Alonso W (1967): Regional Development and Planning, A case study of Venezuela M I T Press Cambridge Mass.

Glikson Arthur (1955) Regional Planning and Development, Netherland Universities foundation fro International co-operation. London

Government of India Planning commission (1961); Third Five year Plan, Chapter on Regional imbalances in Development, New Delhi

Marks-100
Semester Examination=80Marks
Internal Assessment=20marks

Environmental Geography

Unit-I

Geography as a study of Environment, Development of environmental studies, Approaches to environmental studies, concepts of ecology and ecosystem. Man-environment relationship. Environmental movements-Chipko Andolan, Narmada dam Andolan, Si lent Valley Movement.

Unit-II

The problems and causes of environmental degradation, Deforestation, Soil erosion, Desertification. Air pollution, water pollution, impact of pesticides and fertilizers, impact of coal mining, on local Environment, Disposal of solid waste in urban areas.

Unit- III

Environmental management: Environmental education, preservation of ecological balance at local, regional and National level, Major environmental policies and programme. Sample studies: Ganga Action Plan, Tiger Projects in Maharashtra, Environment laws.

Unit –IV

Emerging Environmental issues: Population explosion, food security, global warming, conservation of bio-diversity, Bio-Diversity Act 2002, Sustainable development. Impact of irrigation, Problem of rehabilitation of people. Environmental Impact Assessment notification 1994.

Suggested reading:

Singh savindra: Environment Geography, Prayag Praksashan

Lal : Environment Geography

Semester - IV

PAPER – III (Elective Paper iii)

Marks-100

Semester Examination=80Marks

Internal Assessment=20marks

POLITICAL GEOGRAPHY

UNIT – I - Definition, Development and Scope of Political Geography, Geopolitics and Political Geography. Global Strategic views and Theories of Political Geography Hartland, Rim land and Geo – Strategic region concept.

UNIT –II - Evolution of state – origin of state – state of nation. Elements of state location, Shape, Size, Relief, Economic and culture. Frontiers and Boundaries – Definitions of Boundary and frontiers. Functional and morphological classification of Boundaries – boundary problems in India.

UNIT –III - International politics – meaning and subject matter, core Areas – meaning, characteristics, core areas of Different continents. Capital – classification of capitals, factors determining capital, functions of capital.

UNIT – IV – Non – Aligned – Movement (NAM) –

Non Aligned – Movement and India. South Asian Association for regional Co-operation (SAARC), Commonwealth and Supranationalism U.N.O. Indian Federalism. Geo - Politics of Indian Ocean.

Reference –

- 1) Elements of Political Geography – Van Valkenburg and Stotz.
- 2) Political Geography – N. J. G. Pounds
- 3) Political Geography – Navindra Mehta
- 4) Political Geography and World Map – Y. M. Goblet
- 5) Geography behind Politics – A. E. Moodie
- 6) Modern Political Geography – Edward F. Bergmen
- 7) Political Geography – Peter Taylor
- 8) Background of Political Geography – G. R. Crone
- 9) Geography of Modern Politics – Lucils Carlson & Philbrick.
- 10) An Atlas of World Affairs – Andrew Boyd.
- 11) Geography of Politics in a divided world – S. B. Chohen
- 12) Basic Principles of Geopolitics and History – Debabrata Sen.

Marks-100

Semester - IV
PAPER –IV
PRACTICAL – IV

1. Statistical techniques

(40 Marks – 8 Periods)

Study of practical problems on the following particular emphasis on the optional subject offered by the student. (Data and problems attempted should be from the respective optional subject offered by the student)

1. Collection and organization of statistical data. Measures of central tendencies and dispersion.
Statistical significance The normal frequency distribution curve and its use. Probabilities statements.
Methods of sampling - A. Numerical B. Aerial distribution (12 Marks – 2 Periods)
2. tests: A. students T test, B. Chi-square test C. F – test (8 Marks – 2 Periods)
3. Correlation - A. Pearson’s product moment correlation B. Spearman’s rank correlation.
Correlation significance test (10 Marks – 2 Periods)
4. Regression line
Confidence limits (10 Marks – 2 Periods)

2. Project:

(40 Marks – 2 Periods)

Writing of at least one **Project** on any one of the Six theory (Semester III & IV) Papers of the syllabus.

- (A) Collection of data & Data Processing and Tabulation (15 Marks)
- (B) Writing of Project Report (25 Marks)

3. Viva

(10 Marks)

4. Practical Record

(10 Marks)

Suggested Reading

- Aronoff S.(1989): Geographic Information System: Management Perspective, DDI Publication Ottawa.
- Burrough P.A. (1986): principles of Geographic information system for Land Resource Management, Oxford University press, New York.
- Barrett E.C. and L.F Curtis (1992): Fundamentals of Remote Sensing and Air photo Interpretation, McMillan New York
- Campbell J(1989): Introduction to Remote Sensing Guilford, New York
- Clendinning J (1985): Principal and use of Surveying Instruments 2nd edition Blockie A
- Curran (1985): Principals of Remote Sensing Longman, London
- Fraser Taylor D.R. (1991) Geographic In information system Pergamum Press oxford,1991
- Hord R.M.(1989): Digital Image processing of remotely sensed data Academic New York
- Hotine, Major M.(1935) : The re-triangulation of Great Britain Empire Survey Review
- Luder D.(1955): Aerial Photography Interpretation: Principals and Application Mc graw Hill, New York.
- Mark S.Monmoni er (1982): Computer assisted geography, Prentice Hall, Englewood Cliff, New Jersey.
- MaquireD.G.M.F Goodchild and D.W. Rhind (eds)(1991): geographic information system : Principals and Application Taylor& francis Washington.
- Mishra R.P and Ramesh,A (1986) : Fundamentals of cartography.
- Mcmillan Co.New Delhi
- Pal.S.K(1968): Statistics for Geoscientist_ Techniques and Application, Concept, New Delhi
- Peuquet D.Jand D.F. Marble (1990): Introductory teaching in Geographic Information system. Taylor& Fransis Washinton
- Pratt W.K. (1978): Digital Image Processing, Wiley, New York.
- Rao D.P(ed)(1998): Remote Sensing for Earth Resources, Association of Exploration Geophysicist,
- Star J and J Estes (1994); Geomorphic Information system: An Introduction Prentice Hall Englewood Cliff, New Jers
- Thomas M. Lilles and and Ralph W Kefer,(1994): Remote Sensing and Image Interpretation John Wiley & son, New York.
- Nagtode P. M. & Lanjewar H.D. : Nakashashtra, Pimplapure Publication Nagpur.