

**B.A./B.Sc. (GENERAL) PROGRAMME
GEOGRAPHY (GGRG)**

SCHEME OF COURSES

SEMESTER – I

1. **GGRG-101: PHYSICAL GEOGRAPHY (PART – I)** Marks = 100
(End Semester = 80 + Internal Assessment = 20)

SEMESTER-II

2. **GGRG-201: PHYSICAL GEOGRAPHY (PART – II)** Marks = 100
(End Semester = 80 + Internal Assessment = 20)

SEMESTER-III

3. **GGRG-301: HUMAN AND POPULATION GEOGRAPHY** Marks = 60
(End Semester = 48 + Internal Assessment = 12)
4. **GGRG-302: PRACTICAL** Marks = 40
(End Semester = 32 + Internal Assessment = 8)

SEMESTER-IV

5. **GGRG-401: REGIONAL GEOGRAPHY OF INDIA** Marks = 60
(End Semester = 48 + Internal Assessment = 12)
6. **GGRG-402: PRACTICAL** Marks = 40
(End Semester = 32 + Internal Assessment = 8)

SEMESTER-V

7. **GGRG-501: ECONOMIC GEOGRAPHY** Marks = 60
(End Semester = 48 + Internal Assessment = 12)
8. **GGRG-502: PRACTICAL** Marks = 40
(End Semester = 32 + Internal Assessment = 8)

SEMESTER-VI

9. **GGRG-601: REGIONAL GEOGRAPHY OF THE WORLD** Marks = 60
(End Semester = 48 + Internal Assessment = 12)
10. **GGRG-602: PRACTICAL** Marks = 40
(End Semester = 32 + Internal Assessment = 8)

GGRG – 101
GEOGRAPHY- I

PHYSICAL GEOGRAPHY (PART – I)

Total Marks : 100 (80 Marks for End Semester, 20 Marks for Internal Assessment)

No. of Units : 3 (Unit I & II carry 30 marks each and Unit III carries 20 marks)

Course Contents:

Unit – I Geomorphology

Marks – 30
Lectures – 18

1. Basic concepts in Geomorphology
2. Major land forms of the earth : plains, plateaus and mountains
3. Geomorphic processes; weathering and erosion
4. Earth's movements: orogenic and epirogenic
5. Earthquakes and volcanoes
6. Earth's interior; Wegener's continental drift theory

Unit – II Climatology

Marks – 30
Lectures – 18

1. Weather and climate : Definition, elements and factors
2. Atmospheric temperature : Horizontal and Vertical distribution ; Insolation and heat budget
3. Atmospheric pressure ; Global pressure System and wind belts
4. Concept of air masses and fronts ; the classification ; cyclones and anticyclones

Unit – III Oceanography

Marks – 20
Lectures – 12

1. Introduction to ocean floor topography
2. Salinity and composition of sea water
3. Ocean currents : Atlantic, pacific and Indian oceans
4. Ocean deposits

RECOMMENDED TEXT BOOKS:

1. Singh S,,: Geomorphology
2. Gautam, A. : Geomorphology.
3. Singh, S. : Physical Geography
4. Lal, D.S. : Climatology
5. Lal, D.S. : Oceanography

REFERENCE BOOKS:

1. Strahler, A.N.1969: Physical Geography, 3rd Edition, Wiley International.
2. Ahmed, E., 1985: Geomorphology, Kalyani Publiser, New Delhi.
3. Lal, D.S. : Physical Geography

GGRG – 301
GEOGRAPHY- III

HUMAN & POPULATION GEOGRAPHY

Total Marks : 60 (48 marks for End Semester, 12 marks for Internal Assessment)

No. of Units : 2 (Each Unit carries 24 marks)

Course Contents:

Unit – I Human Geography

Marks – 24

Lectures - 15

1. Human Geography ; Definition, Nature and Scope
2. Man – Environment relationship under different ecological settings
3. Classification and spatial distribution of human races

Unit – II Population Geography

Marks – 24

Lectures - 15

1. Population growth and distribution
2. Migration : Causes and Consequence
3. Types of settlement ; pattern of rural settlement ; functional classification of towns

RECOMMENDED TEXT BOOKS:

1. Hussain, M.: Human Geography, DVS Publishers, Ghy
2. Chandna, R.C. Population Geography
3. Negi, B.S. : Human Geography
4. Singh, L.R. : Fundamentals of Human Geography
5. Ghosh, B.N. : Fundamentals Population Geography, Sterling Publishers Pvt. Ltd. New Delhi

REFERENCE BOOKS:

1. Hassan, Md. Izhar : Population Geogarchy , Rawat Publication, New Delhi
2. Gautam, A.: Human Geography
3. Khan, N.: Introducing Human Geography, DVS Publishers, Ghy
4. Austin, M.: Human Geography, DVS Publishers, Ghy

GGRG – 302
GEOGRAPHY- IV

PRACTICAL

Total Marks : 40 (32 marks for End Semester, 8 marks for Internal Assessment)

No. of Units : 3 (Unit I & II carry 16 marks each and Unit III carries 8 marks)

Unit – I Study of Toposheet and Profile drawing **Marks – 16**

1. Interpretation of toposheets
2. Preparation of transact chart
3. Drawing of profiles : serial and superimposed profiles, projected, composite & interpolation

Unit – II Climatic Data Study **Marks – 16**

1. Drawing of climograph & hythergraph
2. Preparation of line graph & bar diagraph
3. weather map interpretation – summer and winter

Unit – III Practical Note Book & Viva-voce **Marks – 8**

1. Practical Note Book : 5 marks
2. Viva-voce : 3 marks

RECOMMENDED TEXT BOOKS:

1. Singh, R.L.: Fundamentals of Practical Geography, DVS Publication, Ghy
2. Singh, G.: Map Wok & Practical Geography, DVS Publication, Ghy
3. Singh, R.L.: Elements of Practical Geography, DVS Publication, Ghy
4. Robinson, : Elements of cartography, DVS Publication, Ghy

GGRG – 401
GEOGRAPHY- V

REGIONAL GEOGRAPHY OF INDIA

Total Marks : 60 (48 marks for End Semester, 12 marks for Internal Assessment)

No. of Units : 3 (Each Unit carry 16 marks)

Course Contents:

Unit – I Physical Frame Work

Marks – 16
Lectures - 10

1. India : Introduction ; Geology & Physiographical divisions
2. Drainage systems & climate
3. Soil and natural vegetation

Unit – II Economic Characteristics and Population

Marks – 16
Lectures - 10

1. Agriculture ; major crops – paddy, wheat, cotton, sugarcane, tea
2. Major minerals & power resources : iron ore, copper, aluminium and coal petroleum, natural gas and hydro power
3. Industries : Iron & Steel, Cotton textiles, chemicals ; transport & communication
4. Population : growth & distribution

Unit – III North –East India

Marks – 16
Lectures - 10

1. Physiography, climate, soil & natural vegetation
2. Major mineral & power resources, transport & communication systems
3. Agriculture : major crops – production & distribution
4. Economic problems of North-East India

RECOMMENDED TEXT BOOKS:

1. Singh, R.L(ed) A Regional Geography of India,1967
2. Tiwari, R.C. : Geography of India, Prayag Pushtak Bhawan
3. Khullar : India A Comprehensive Geography , Kalyani Publishers
4. Taher, Md & Ahmed : North East India
5. Bhattacharyya, N.N. : North East India : A systematic Geography

REFERENCE BOOKS:

1. Taher & Ahmed : Assam : A Geographical Profile
2. Bhagawati, A.K et al: Geography of Assam,2000 Publication of NEIGS
3. Sutta, A.K. India; Resources, Potentialities and Planning ,1973
4. Guha & Chattaraj : A New Approach to Economic Geography

GGRG – 402
GEOGRAPHY- VI

PRACTICAL

Total Marks : 40 (32 marks for End Semester, 8 marks for Internal Assessment)

No. of Units : 3 (Unit I & II carry 16 marks each and Unit III carries 8 marks)

Unit – I Projections :Drawing of graticules of the following projections **Marks – 16**

1. Polar Zenithal Gnomonic
2. Polar Zenithal Stereographic
3. Polar Zenithal Orthographic
4. Conical projection (one standard parallel)
5. Cylindrical equal area

Unit – II Surveying **Marks – 16**

1. Basic concepts
2. Plain table survey
3. Prismatic compass survey

Unit – III Practical note book & Viva-voce **Marks – 8**

1. Practical Note Book : 5 marks
2. Viva-voce : 3 marks

RECOMMENDED TEXT BOOKS:

1. Singh, R.L.: Fundamentals of Practical Geography, DVS Publication, Ghy
2. Singh, G.: Map Wok & Practical Geography, DVS Publication, Ghy
3. Kanetkar and Kulkarni : Surveying and leveling Part – I
4. Singh, R.L.: Elements of Practical Geography, DVS Publication, Ghy

GGRG – 501
GEOGRAPHY- VII

ECONOMIC GEOGRAPHY

Total Marks : 60 (48 marks for End Semester, 12 marks for Internal Assessment)

No. of Units : 2 (Each Unit carries 24 marks)

Course Contents:

Unit – I Introduction

Marks - 24
Lectures - 15

Economic geography: Introduction, economic activities in plains and hills of NE India, economic activities versus environmental problems, natural resources and their classification, world distribution of Iron, coal, petroleum, gold, copper, aluminium. Hydro-electricity in North-East India - prospects and problems

Unit – II Industries

Marks – 24
Lectures - 15

Industry: Types, Location factors of iron and steel industry, cotton textiles and chemical industries. World distribution of rice, wheat, tea, coffee, cotton, jute and rubber.

RECOMMENDED TEXT BOOKS:

1. Guha, J.L & Chattarj, P.R 1999, new edition): A new Approach to Economic Geography.
2. Gautam, A. : Admanced Economic Geography
3. Hussain, M. : Agricultural Geography
4. Singh and Dhillon : Agricultural Geography
5. Raza, M. and Agarwal, Y : Transport Geography of India:

REFERENCE BOOKS:

1. Mitchell, B. : Geography : An Resource Analysis
2. Hartshorne, T.N., & Alexander J.W. : Economic Geography, Prentice Hall, New Delhi
3. Choudhuri, M.R. 1970 Indian Industries, Development and Location, Oxford
4. Das Gupta, A Economic & Commercial Geography
5. Smith, D.M. : An Economic Geographical Analysis

GGRG – 502
GEOGRAPHY- VIII

PRACTICAL

Total Marks : 40 (32 marks for End Semester, 8 marks for Internal Assessment)

No. of Units : 3 (Unit I & II carry 16 marks each and Unit III carries 8 marks)

Unit – I Statistical methods **Marks- 16**

Measures of central tendency-mean, median and mode. Measures of dispersion-mean deviation and standard deviation.

Unit – II Cartograms **Marks - 16**

Pie diagram, bar diagram, histogram, frequency curve, population map by dot method, density and literacy by shade method (data from India and NE India.)

Unit – III Practical note book and Viva-voce **Marks – 8**

1. Practical Note Book : 5 marks
2. Viva-voce : 3 marks

RECOMMENDED TEXT BOOKS:

1. Singh, R.L.: Fundamentals of Practical Geography, DVS Publication, Ghy
2. Singh, G.: Map Wok & Practical Geography, DVS Publication, Ghy
3. Mahmood, A. : Statistical Methods in Geography
4. Singh, R.L.: Elements of Practical Geography, DVS Publication, Ghy

GGRG – 601

REGIONAL GEOGRAPHY OF THE WORLD

Total Marks : 60 (48 marks for End Semester, 12 marks for Internal Assessment)

No. of Units : 2 (Each Unit carries 24 marks)

Course Contents:

Unit – I Asia

Marks – 24

Lectures - 15

1. Physiography, Soil, Climate, Vegetation, Minerals and agricultural resources, Major Industries,
2. Distribution of Population

Unit – II Europe

Marks – 24

Lectures - 15

1. Physiography, Soil, Climate, Vegetation, Minerals and agricultural resources, Major Industries,
2. Distribution of Population

RECOMMENDED TEXT BOOKS:

1. Manku, D.S. : A Regional Geography of World, Kalyani Publishers
2. Gautam, A : World Geography, Sarda Pushtak Bhawan, Allahabad
3. Bradshaw, M : World Regional Geography

REFERENCE BOOKS:

1. Gourou, P. (1980) : The Tropical World, Longman, London
2. Cole, J. (1996) : A Geography of World's Major Regions, Routledge, London
3. Jackson, R.H. et. Al. (1991) : World Regional Geography – Issues for Today

GGRG – 602
GEOGRAPHY- X

PRACTICAL

Total Marks : 40 (32 marks for End Semester, 8 marks for Internal Assessment)

No. of Units : 3 (Unit I & II carry 16 marks each and Unit III carries 8 marks)

Unit – I Computer Drawing **Marks – 12**

Computer map drawing: Boundaries, use of colours, lettering, rivers, roads, railways to show in maps of India, North east India and Assam.

Unit – II Field Report **Marks – 20**

Field Study: Preparation of a Report on the basis of the data collected from field study

Unit – III Practical note book and Viva-voce **Marks – 8**

1. Practical Note Book : 5 marks
2. Viva-voce : 3 marks

RECOMMENDED TEXT BOOKS:

1. Singh, R.L.: Fundamentals of Practical Geography, DVS Publication, Ghy
2. Singh, G.: Map Wok & Practical Geography, DVS Publication, Ghy
3. Mahmood, A. : Statistical Methods in Geography
4. Singh, R.L.: Elements of Practical Geography, DVS Publication, Ghy
5. Mishra, R.P. : Fundamentals of Cartography

**B.A./B.Sc. (MAJOR) PROGRAMME
GEOGRAPHY (GGRM)**

SCHEME OF COURSES

SEMESTER – I

1. GGRM-101: INTRODUCTION TO GEOGRAPHY

Marks = 100

(End Semester = 80 + Internal Assessment = 20)

SEMESTER-II

2. GGRM-201: PHYSICAL GEOGRAPHY

Marks = 100

(End Semester = 80 + Internal Assessment = 20)

SEMESTER-III

3. GGRM-301: CLIMATOLOGY

Marks = 60

(End Semester = 48 + Internal Assessment = 12)

4. GGRM-302: PRACTICAL

Marks = 40

(End Semester = 32 + Internal Assessment = 8)

**5. GGRM-303: ENVIRONMENTAL GEOGRAPHY AND
ECONOMIC GEOGRAPHY (PART-I)**

Marks = 60

(End Semester = 48 + Internal Assessment = 12)

6. GGRM-304: PRACTICAL

Marks = 40

(End Semester = 32 + Internal Assessment = 8)

SEMESTER-IV

7. GGRM-401: HUMAN GEOGRAPHY

Marks = 60

(End Semester = 48 + Internal Assessment = 12)

8. GGRM-402: PRACTICAL

Marks = 40

(End Semester = 32 + Internal Assessment = 8)

9. GGRM-403: ECONOMIC GEOGRAPHY (PART-II)

Marks = 60

(End Semester = 48 + Internal Assessment = 12)

10. GGRM-404: PRACTICAL

Marks = 40

(End Semester = 32 + Internal Assessment = 8)

SEMESTER-V

11. **GGRM-501: REGIONAL GEOGRAPHY OF INDIA (PART – I)** Marks = 60
(End Semester = 48 + Internal Assessment = 12)
12. **GGRM-502: PRACTICAL** Marks = 40
(End Semester = 32 + Internal Assessment = 8)
13. **GGRM-503: REGIONAL GEOGRAPHY OF THE WORLD (PART – I)** Marks = 60
(End Semester = 48 + Internal Assessment = 12)
14. **GGRM-504: PRACTICAL** Marks = 40
(End Semester = 32 + Internal Assessment = 8)
15. **GGRM-505: POLITICAL GEOGRAPHY AND GEOPOLITICAL ISSUES** Marks = 60
(End Semester = 48 + Internal Assessment = 12)
16. **GGRM-506: PRACTICAL** Marks = 40
(End Semester = 32 + Internal Assessment = 8)
17. **GGRM-507: REGIONAL PLANNING AND SOCIAL GEOGRAPHY** Marks = 60
(End Semester = 48 + Internal Assessment = 12)
18. **GGRM-508: PRACTICAL** Marks = 40
(End Semester = 32 + Internal Assessment = 8)

SEMESTER-VI

19. **GGRM-601: MAP PROJECTIONS AND CARTOGRAPHIC METHODS** Marks = 60
(End Semester = 48 + Internal Assessment = 12)
20. **GGRM-602: PRACTICAL** Marks = 40
(End Semester = 32 + Internal Assessment = 8)
21. **GGRM-603: REGIONAL GEOGRAPHY OF INDIA (PART – II)** Marks = 60
(End Semester = 48 + Internal Assessment = 12)
22. **GGRM-604: PRACTICAL** Marks = 40
(End Semester = 32 + Internal Assessment = 8)
23. **GGRM-605: REGIONAL GEOGRAPHY OF THE WORLD (PART – II)** Marks = 60
(End Semester = 48 + Internal Assessment = 12)
24. **GGRM-606: PRACTICAL** Marks = 40
(End Semester = 32 + Internal Assessment = 8)
25. **GGRM-607: GEOGRAPHIC THOUGHTS AND
QUANTITATIVE METHODS** Marks = 60
(End Semester = 48 + Internal Assessment = 12)
26. **GGRM-608: PRACTICAL** Marks = 40
(End Semester = 32 + Internal Assessment = 8)

GGRM-101
GEOGRAPHY MAJOR- I
INTRODUCTION TO GEOGRAPHY

Total Marks : 100 (80 Marks for End Semester, 20 Marks for Internal Assessment)

No. of Units : 4 (Each Unit carries 20 marks: 20 marks)

Objectives of the paper:

This introductory paper is intended to acquaint the students with distinctiveness of Geography as a field of learning in Social Science as well as in Natural Science. The philosophy and methodology of the subject is discussed in such a way that the students develop a keen interest in the subject and pursue it for higher studies.

Course Contents:

Unit – I	Introduction	Marks – 20 Lectures – 12
	<ol style="list-style-type: none">1. Definition, nature, and scope of Geography2. Objectives and relevance3. Place of Geography in the classification of Sciences4. Geography and other disciplines	
Unit – II	Geography – Major themes and sub-themes	Marks – 20 Lectures – 12
	<ol style="list-style-type: none">1. Geography as the study of environment2. Man-environment relationship – Determinism and Possibilism3. Dualism in Geography – systematic/regional, physical/human	
Unit – III	Perspective in Geography	Marks – 20 Lectures – 12
	<ol style="list-style-type: none">1. History of Geography2. Development of Geography – classical, medieval and modern periods3. Recent trends in Geography	
Unit – IV	Introduction to Geomorphology	Marks – 20 Lectures – 12
	<ol style="list-style-type: none">7. The nature of physical Geography and its inter-relation with other branches of earth sciences2. The place of Geomorphology in Physical Geography3. Basic concepts in Geomorphology4. Recent trends in Geomorphology5. Geological history of the earth and Geological time scale	

RECOMMENDED TEXT BOOKS:

1. Singh S,,: Geomorphology
2. Gautam, A. : Geomorphology.
3. Ahmed, E., (1985): Geomorphology, Kalyani Publiser, New Delhi.
4. Strahler, A.N.(1969): Physical Geography, 3rd Edition, Wiley International.
5. Dayal, P.A. : Text Book of Geomorphology
6. Thornbury, W.D.(1969): Principles of Geomorphology, Wiley International.
7. Hartshorne ,R,(1959) Perspectives on Nature of Geography,R.McNally & Co.

REFERENCE BOOKS:

1. Chorley, R.J.:Water, Earth and Man, Methun and Co., London.
2. Chorley, R.J.,(ed),1968: Models in Geography, Methun and Co.
3. Gregory, K.J.(1985): The Nature of Physical Geography, Edward Arnold, London.
4. Leopold, L.B., Wolman, M.G., Milier, J.P., 1964: Fluvial Processes in Geomorphology, Freeman, Sanfransisco.
5. Penck,W.,1924: Morphological Analysis of Landforms, Mc Millan, London.
6. Sharma, H.S.(ed)1982: Perspectives in Geomorphology, Vol. I to IV, Concept, New Delhi.
7. Sharma, H.S.(ed) 1986: Geomorphology-Earth Surface Processes and Forms, Tata Mc Graw Hill, New Delhi.

GGRM-201
GEOGRAPHY MAJOR- II

PHYSICAL GEOGRAPHY
(Geomorphology, Biogeography and Oceanography)

Total Marks : 100 (80 Marks for End Semester, 20 Marks for Internal Assessment)

No. of Units : 4 (Each Unit carries 20 marks)

Objectives of the paper:

The basic objective of this course is to introduce the latest concepts in physical geography, essentially geomorphology, oceanography, soil and biogeography to the students of geography in an adequate manner with a view to familiarize about needs of understanding these concepts and their utility in human life.

Course Contents:

Unit – I	Theories in Geomorphology	Marks – 20 Lectures - 12
	<ol style="list-style-type: none">1. Origin of the continents and ocean basins – Tetrahedral hypothesis of Lowthian Green, Wegener’s Continental Drift Theory2. Theory of plate tectonics3. Earth’s movements – orogenic and epeirogenic : Theories of mountain building – Kober and Holmes4. The concept of Isostasy – views of Airy, Pratt, Halford and Bowie5. Interior of the earth – seismological evidences : Earthquakes and Volcanoes	
Unit – II	Geomorphic processes	Marks – 20 Lectures - 12
	<ol style="list-style-type: none">1. Geomorphic agents and processes – erosion transport and deposition2. Concept of cycle of erosion – views of Davis and Penck : works of running and ground water and their resultant landforms3. Landforms associated with fluvial, glacial, arid, coastal and karst regions4. Drainage basin as a geomorphic unit – hydro-geomorphology, drainage system and patterns	
Unit – III	Biogeography	Marks – 20 Lectures - 12
	<ol style="list-style-type: none">1. Definition, scope and significance2. World distribution of plants and its relation to soil, climate and human activities3. World distribution of animals and its relation vegetation, climate and human activities4. Soil – soil forming processes, classification and distribution of soil, soil horizon and profile, soil erosion and conservation. Importance of soil, major soil types of India and Assam	
Unit – IV	Oceanography	Marks – 20 Lectures - 12
	<ol style="list-style-type: none">1. Definition of oceanography, surface configuration of ocean floor – continental shelf, continental slope, deep sea plain. Bottom configurations of the Atlantic, Pacific and Indian oceans2. Salinity and temperature ocean water3. Tides and currents : Ocean currents of the Atlantic, Pacific and Indian oceans	

4. Marine deposits : Theories of origin of Coral reefs and Atolls – subsidence, non-subsidence and glacial control theories
5. Importance of oceans as store house of resources

RECOMMENDED TEXT BOOKS:

1. Singh S,,: Geomorphology
2. Gautam, A. : Geomormpology.
3. Ahmed, E., 1985: Geomorphology, Kalyani Publiser, New Delhi.
4. Steers, J.A. : Unstable Earth
5. Bhattacharyya, N.N. : Biogeography
6. Mahanta, A. P. : Biogeography
7. Mahanta, A.P. : Snatakor Jibo Bhugul
8. Lal, D.S. : Oceanography and Climatology

REFERENCE BOOKS:

1. Chorley, Water, Earth and Man, Methun and Co., London.
2. Leopold, L.B., Wolman, M.G., Milier, J.P., 1964: Fluvial Processes in Geomorphology, Freeman, Sanfransisco.
3. Penck,W.,1924: Morphological Analysis of Landforms, Mc Millan, London.
4. Hussain, H(ed),1994: Bio-geography (part I & II), Anmol Publications,New Delhi.
5. Robinsom,H.,1982: Bio-geography, ELBS, Mc Donald & Evans,London.
6. Simmons,I.G.,1974: Bio-geography :Natural and Cultural,London
7. Tiby,1982: Bio-geography , Longman
8. King, CAM (1972) : Oceanography for Geographers, E. Arnold, London
9. Sharma, R.C. et al (1970) : Oceanography for Geographers, Chetnya Publ. House, Allahabad

GGRM-301
GEOGRAPHY MAJOR- III

CLIMATOLOGY

Total Marks : 60 (48 marks for End Semester, 12 marks for Internal Assessment)

No. of Units : 3 (Each Unit carries 16 marks)

Objectives of the paper:

This paper is structured with the components of climatology. The basic objective of this course is to acquaint the students with the different aspects of climate. The course contents lead to the identification of climatic differences on the earth and consequences of human activities on the atmospheric processes.

Course Contents:

Unit – I Atmosphere

Marks – 16

Lectures – 10

1. Composition and structure of the atmosphere; Weather, climate and their elements and factors
2. Atmospheric temperature: Heating and cooling of atmosphere – conduction, convection and radiation; mean temperature, vertical, horizontal and seasonal distribution of temperature
3. Insolation and global heat balance – distribution and factors affecting distribution of insolation. Heat budget of the earth and atmosphere.
4. Atmospheric pressure and winds – vertical and horizontal distribution of pressure; planetary, periodic and local winds; monsoon and jet stream

Unit – II Humidity and precipitation

Marks – 16

Lectures – 10

1. Atmospheric moisture – humidity, evaporation and condensation; fogs and clouds – characteristics and classification
2. Concept of hydrological cycle – types of precipitation, world patterns of rainfall distribution.
3. Air mass and fronts – concepts, classification and properties
4. Atmospheric disturbances and the process of development – tropical and temperate cyclones

Unit – III Classification of climates

Marks – 16

Lectures – 10

1. Basis of Koppen's classification, its characteristics and related plants and animal life
2. Basis of Thornthwait's classification – distribution and characteristics
3. Classification of Indian climate and their related plants and animal lives.
4. Climatic change and recent issues – its impact upon human activities

RECOMMENDED TEXT BOOKS:

1. Lal, D.S., 1998: Climatology, Sharda Pustak Bhawan, Allahabad.
2. Critsfield, H.J., 1975: General Climatology, Prentice Hall, New Delhi.
3. Singh, S. : Climatology, Prayag Pustak Bhawan

REFERENCE BOOKS:

4. Barry,R.G.& Chorley, R.J.1971: Atmosphere, Weather & Climate, Methuew Co.,London.
2. Lockwood,J.G.,1976: World Climatology-Environmental Approach, Ed. Arnold Ltd.
3. Miller, A.A.,1953: Climatology, Dutton.
4. Trewarha, G.T. & Horn,L.A.,1980: An Introduction to Climate, International Studies. Bio-geography

GGRM-302
GEOGRAPHY MAJOR- III

PRACTICAL

Total Marks : 40 (32 marks for End Semester, 8 marks for Internal Assessment)

No. of Units : 3 (Unit I & II carry 16 marks each and Unit III carries 8 marks)

Objectives of the paper:

This paper is designed to acquaint the students with the topographic study and representation of climatic data and their analyses.

Course Contents:

Unit – I Toposheet study and profile drawing **Marks – 16**

1. Interpretation of Survey of India Toposheets:
 - (a) Interpretation of a hilly and plain area of India in respect of:
 - (i) Relief (ii) Drainage (iii) Settlement (iv) Vegetation
 - (v) Communication pattern
 - (b) Preparation of Transact Chart and its interpretation
2. Drawing of profiles – serial, superimposed, composite and projected profiles and their interpretation

Unit – II Climatic data study **Marks – 16**

1. Study of the weather symbols
2. Indian daily weather map interpretation for the summer and winter seasons.
3. Representation of climatic data:
 - (a) Preparation of climograph, hythergraph and ergograph and their interpretation
 - (b) Preparation of rainfall variability map of Assam

Unit – III Practical note book and Viva-voce **Marks – 8**

1. Practical note book - 5 marks
2. Viva-voce - 3 marks

RECOMMENDED TEXT BOOKS:

1. Mishra, R.P. : Fundamentals of Cartography
2. Singh, R.L.: Fundamentals of Practical Geography, DVS Publication, Ghy
3. Singh, G.: Map Wok & Practical Geography, DVS Publication, Ghy
4. Singh, R.L.: Elements of Practical Geography, DVS Publication, Ghy
5. Monkhouse, : Maps & Diagrams

GGRM-303
GEOGRAPHY MAJOR- V

**ENVIRONMENTAL GEOGRAPHY AND ECONOMIC
GEOGRAPHY (PART – I)**

Total Marks : 60 (48 marks for End Semester, 12 marks for Internal Assessment)

No. of Units : 3 (Each Unit carries 16 marks)

Objectives of the paper:

This paper is structured to acquaint the students with the various aspects of Environmental Geography, Ecology and Ecosystem as well as to acquaint the students with the various sectors of economy and the importance and spatial distribution of resources.

Course Contents:

Unit – I Environmental Geography

Marks – 16
Lectures - 10

1. Meaning and scope of environmental geography – Man-Environment relationship in historical perspective.
2. Environmental degradation and conservation : deforestation, desertification and pollution
3. Environmental impact assessment and management. Approaches to environmental management, disaster and disaster management
4. Global and regional environmental programmes – functions of UNEP and UNDP

Unit – II Ecology and Ecosystem

Marks – 16
Lectures - 10

1. Meaning, scope and aims of ecology, types of ecology, ecological concepts and principles
2. Ecosystem – types, structures, functioning, productivity and stability of ecosystem
3. Concept of biodiversity – threat to biodiversity and its preservation
4. Concept of environment and development. Sustainable development concept

Unit – III Geography of Resources

Marks – 16
Lectures - 10

1. Economic geography – definition, nature and scope : sectors of economy – Primary, secondary and tertiary
2. Resources – meaning and classification
3. Distribution of mineral resources in the world – Iron ore, copper and aluminium
4. Distribution of major power resources in the world – coal, petroleum and natural gas : development of hydel power
5. Role of technology in resource utilization : resource crisis and conservation of resources

RECOMMENDED TEXT BOOKS:

1. Singh, S., : Environment Geography, Prayag Pustak Bhawan, Allahabad
2. Gautam, A. : Environmental Geography, DVS Publication, Ghya
3. Chandna, R.C. : Environmental Geography. Kalyani Publishers, New Delhi
4. Guha, J.L & Chattarj, P.R 1999, new edition): A new Approach to Economic Geography.
5. Gautam, A. : Advanced Economic Geography
6. Das Gupta, A Economic & Commercial Geography

REFERENCE BOOKS:

1. Park C. : The Environment, Routledge, London
2. Saxena K.K. : Environmental Studies, DVS Publication, Ghy
3. Jackson, A.: Environmental Science
4. Biswas, B.C.: Environment Geography, Eastern Book House, Ghy
5. Saxena H.M. : Environmental Geography, DVS Publication, Ghy
6. Mitchell, B. : Geography : An Resource Analysis
7. Hartshorne, T.N., & Alexander J.W. : Economic Geography, Prentice Hall, New Delhi

GGRM-304
GEOGRAPHY MAJOR- VI

PRACTICAL (Cartography)

Total Marks : 40 (32 marks for End Semester, 8 marks for Internal Assessment)

No. of Units : 3 (Unit I & II carry 16 marks each and Unit III carries 8 marks)

Objectives of the paper:

This paper is designed to acquaint the student with the use of different cartographic methods to represent different socio-economic data and their analyses.

Course Contents:

Unit – I Cartographic representation Marks – 16

1. Types of cartographic symbols and their uses (exercise on any type of data)
 - (a) Points (proportional circles and sphere)
 - (b) Line (Isopleth and flow line)
 - (c) Area (Choropleth)
2. Use of line and bar graphs including polygraph

Unit – II Morphometric analysis Marks – 16

1. Delineation of drainage basin
2. Drainage ordering by Horton's and Strahler's methods
3. Use of rotameter and planimeter – determination of drainage density, drainage frequency and bifurcation ratio
4. Cross and longitudinal profile of a river and Sinuosity index

Unit – III Practical note book and Viva-voce Marks – 8

1. Practical note book - 5 marks
2. Viva-voce - 3 marks

RECOMMENDED TEXT BOOKS:

1. Mishra, R.P. : Fundamentals of Cartography
2. Singh, R.L.: Fundamentals of Practical Geography, DVS Publication, Ghy
3. Singh, G.: Map Work & Practical Geography, DVS Publication, Ghy
4. Singh, R.L.: Elements of Practical Geography, DVS Publication, Ghy
5. Monkhouse, : Maps & Diagrams

GGRM-401
GEOGRAPHY MAJOR- VII

HUMAN GEOGRAPHY

Total Marks : 60 (48 marks for End Semester, 12 marks for Internal Assessment)

No. of Units : 3 (Each Unit carries 16 marks)

Objectives of the paper:

This introductory paper is intended to acquaint the students with distinctiveness of Geography as a field of learning in Social Science as well as in natural science. The philosophy and methodology of the subject is discussed in such a way that the students develop a keen interest in the subject and pursue it for higher studies.

Course Contents:

Unit – I	Human Geography	Marks – 16 Lectures - 10
	<ol style="list-style-type: none">1. Definition, scope and nature of Human Geography, Branches of Human Geography2. Development of Human Geography in France, Germany, USA3. Approaches to the study of Human Geography4. Two main schools of Human Geography – Environmental Determinism and Possibilism, Neo Determinism, Cultural or Social Determinism	
Unit – II	Pattern of Human adaptation, Mankind and settlement	Marks – 16 Lectures - 10
	<ol style="list-style-type: none">1. Human adaptation to various geographical conditions<ol style="list-style-type: none">i) Plateaus – Gonds and Bhils of Central India, Khasis of Maghalaya Plateauii) Nagas of the hills of North East India2. Human adaptation in the flood plain regions with special reference to the Brahmaputra and the Ganga Plains3. Human adaptation in cold regions and hot regions4. Human development – concept and measurement 5. Evolution of man – classification and spatial distribution of mankind and their physical and social profiles6. Racial classification of Indian population and their spatial distribution7. Origin and growth of human settlement, rural and urban settlement – factors of growth and their types : patterns of rural settlement : functional classification of towns	
Unit – III	Population Growth and Distribution, Population regions and policies	Marks – 16 Lectures - 10
	<ol style="list-style-type: none">1. Definition, scope and subject matter of population Geography. Relationship with other disciplines, Approaches2. Spatial distribution of population – factors affecting distribution and density of population3. Population growth – components and determinants, Demographic transition, Population growth theories – Malthus and Marx4. Population composition – types – biological, cultural and economic	

5. Population regions of the world and their characteristics; population regions of India – dynamic, prospective and problem regions
6. Over population, under population – problems and their remedial measures
7. Population policies – developed (USA) and developing (China and India) countries

RECOMMENDED TEXT BOOKS:

1. Hussain, M.: Human Geography, DVS Publishers, Ghy
2. Chandna, R.C. Population Geography
3. Negi, B.S. : Human Geography
4. Singh, L.R. : Fundamentals of Human Geography
5. Ghosh, B.N. : Fundamentals Population Geography, Sterling Publishers Pvt. Ltd. New Delhi

REFERENCE BOOKS:

1. Hassan, Md. Izhar : Population Geogaphy , Rawat Publication, New Delhi
2. Gautam, A.: Human Geography
3. Khan, N.: Introducing Human Geography, DVS Publishers, Ghy
4. Austin, M.: Human Geography, DVS Publishers, Ghy

GGRM-402
GEOGRAPHY MAJOR- III

PRACTICAL
(Population data study and map projections)

Total Marks : 40 (32 marks for End Semester, 8 marks for Internal Assessment)

No. of Units : 3 (Unit I & II carry 16 marks each and Unit III carries 8 marks)

Objectives of the paper:

This paper is designed to acquaint the student with the use of different cartographic methods to represent different population data and their analysis, and procedure of construction of map projections.

Course Contents:

Unit – I Population data study **Marks – 16**

1. Preparation of population distribution and density maps of Assam and India
2. Preparation of population growth curve – Assam and India
3. Age-sex pyramid for developed and developing countries

Unit – II Map Projections **Marks – 16**

1. Construction of the graticules with the help of the following projections (perspective and non-perspective) - graphical and mathematical
 - a) Polar Zenithal – Perspective group : Gnomonic, Stereographic, Orthographic
 - b) Polar Zenithal – Non-perspective group : Equal area, Equidistant
2. Cylindrical projections – True, Simple, Equal area
3. Conical projection – One and Two Standard Parallel

Unit – III Practical note book and Viva-voce **Marks – 8**

1. Practical note book - 5 marks
2. Viva-voce - 3 marks

RECOMMENDED TEXT BOOKS:

1. Mishra, R.P. : Fundamentals of Cartography
2. Singh, R.L.: Fundamentals of Practical Geography, DVS Publication, Ghy
3. Singh, G.: Map Wok & Practical Geography, DVS Publication, Ghy
4. Singh, R.L.: Elements of Practical Geography, DVS Publication, Ghy
5. Monkhouse, : Maps & Diagrams
6. George P. Kellaway : Map Projection
7. J.A. Steers : Map Projection

GGRM-403
GEOGRAPHY MAJOR- IX

ECONOMIC GEOGRAPHY (PART – II)

Total Marks : 60 (48 marks for End Semester, 12 marks for Internal Assessment)

No. of Units : 3 (Each Unit carries 16 marks)

Objectives of the paper:

The objectives of this course are to acquaint the students with the various aspects of industrial, agricultural and transport geography.

Course Contents:

Unit – I Industrial Geography

Marks – 16

Lectures - 10

1. Classification of industries, factors of localization – industrial location theories of Weber and Losch
2. Major industries of the world – Iron and steel, cotton textile and chemicals
3. Industrial regions of the world – USA, Japan and India
4. Concept of tourism – tourism as an industry – potentials of tourism industry in India

Unit – II Agricultural Geography

Marks - 16

Lectures - 10

1. Meaning and Scope of Agricultural Geography
2. Physical and Socio-Economic Factors affecting agriculture
3. World distribution of major crops (rice, wheat, cotton, jute, tea, coffee, sugarcane, rubber)
4. Agricultural regions of the world – Whitelessey's classification
5. Von Thunen's theory of agricultural location

Unit – III Transport Geography

Marks - 16

Lectures - 10

1. Transport as a factor of resource utilization – environment and socio-economic factors affecting the growth of transport
2. Means of transport – land, water, air and their relative importance
3. Coordination of transport – network analysis
4. Major trade routes of the world – internal and international trade – world's major trading zones

RECOMMENDED TEXT BOOKS:

1. Guha, J.L & Chattarj, P.R 1999, new edition): A new Approach to Economic Geography.
2. Gautam, A. : Advanced Economic Geography
3. Hussain, M. : Agricultural Geography
4. Singh and Dhillon : Agricultural Geography
5. Raza, M. and Agarwal, Y : Transport Geography of India:

REFERENCE BOOKS:

1. Mitchell, B. : Geography : An Resource Analysis
2. Hartshorne, T.N., & Alexander J.W. : Economic Geography, Prentice Hall, New Delhi
3. Thomes R.S. & Corbin,P.B.1974 Geography of Economic Activity,Mc Graw Hill
4. Wheeler,J.O & Muller P.O. 1981 Economic Geography, Wiley & Sons
5. Isard ,W, 1956,Location and Space EconomyMIT Press
6. Choudhuri,M.R. 1970 Indian Industries, Development and Location, Oxford
7. Das Gupta, A Economic & Commercial Geography
8. Smith, D.M. : An Economic Geographical Analysis

GGRM-404
GEOGRAPHY MAJOR- X

PRACTICAL
(Surveying and Excursion Report)

Total Marks : 40 (32 marks for End Semester, 8 marks for Internal Assessment)

No. of Units : 3 (Unit I & II carry 16 marks each and Unit III carries 8 marks)

Course Content:

Unit – I Fundamentals of surveying :

Marks – 16

- a) Plane table surveying – radiation and intersection methods
- b) Prismatic compass surveying – open and closed traverse

Unit – II Excursion report

Marks – 16

Unit – III Practical note book and Viva-voce

Marks – 8

- 1. Practical note book - 5 marks
- 2. Viva-voce - 3 marks

RECOMMENDED TEXT BOOKS

- 1. Kanetkar, T.P. & Kulkarni, S.V. : Surveying and Levelling
- 2. Mishra, R.P. : Fundamentals of Cartography
- 3. Singh, R.L.: Fundamentals of Practical Geography, DVS Publication, Ghy
- 4. Singh, G.: Map Wok & Practical Geography, DVS Publication, Ghy
- 5. Singh, R.L.: Elements of Practical Geography, DVS Publication, Ghy

GGRM-501
GEOGRAPHY MAJOR- XI

REGIONAL GEOGRAPHY OF INDIA (PART – I)

Total Marks : 60 (48 marks for End Semester, 12 marks for Internal Assessment)

No. of Units : 3 (Each Unit carries 16 marks)

Objectives of the paper:

The basic objective of this course is to give a comprehensive idea about the various geographical aspects of India and NE India including geology, physiography, climate, soil, vegetation and mineral and power resources.

Course Contents:

Unit – I Physical Geography of India

Marks –16
Lectures - 10

1. India – geological structure and physiographic framework
2. Drainage system and climate
3. Soil and vegetation – types and spatial distribution

Unit – II Mineral and power resources

Marks –16
Lectures - 10

1. Mineral resources : iron, copper, aluminum, limestone, manganese and mica – production and spatial distribution
2. Power resources : coal, petroleum, natural gas and water power, nuclear energy production and spatial distribution – non conventional energy sources
3. Present status of utilization and conservation of resources

Unit – III Physical Geography of NE India

Marks – 16
Lectures - 10

1. North East India – introduction of NE India; Geology and physiography of North East India
2. Drainage system and climate
3. Soil and vegetation – type and spatial distribution

RECOMMENDED TEXT BOOKS

1. Singh, R.L(ed) A Regional Geography of India,1967
2. Tiwari, R.C. : Geography of India, Prayag Pushtak Bhawan
3. Khullar : India A Comprehensive Geography , Kalyani Publishers
4. Taher, Md & Ahmed : North East India
5. Bhattacharyya, N.N. : North East India : A systematic Geography

REFERENCE BOOKS:

1. Taher & Ahmed : Assam : A Geographical Profile
2. Bhagawati, A.K et al: Geography of Assam,2000 Publication of NEIGS
3. Spate O.H.K & Learmonth, A.T.A. India and Pakistan.
4. Sutta, A.K. India; Resources, Potentialities and Planning ,1973
5. Guha & Chattaraj : A New Approach to Economic Geography

GGRM-502
GEOGRAPHY MAJOR- XII

PRACTICAL
(Map Projections and Cartograms)

Total Marks : 40 (32 marks for End Semester, 8 marks for Internal Assessment)

No. of Units : 3 (Unit I & II carry 16 marks each and Unit III carries 8 marks)

Objectives of the paper:

This paper is designed to acquaint the students with the drawing of conventional map projections and representation of data by using advanced cartographic methods.

Unit – I Map Projections **Marks - 16**

- i) Zenithal – Equatorial
- ii) Conical – Bonne’s, Polyconic
- iii) Conventional – Gall’s, Mercatots’s, Molweide’s, Sinusoidal

Unit – II Representation of data by using different cartograms **Marks - 16**
(data of population, rainfall, agricultural production soil, vegetation, forest area etc.)

Unit – III Practical note book and Viva-voce **Marks – 8**

- 1. Practical note book - 5 marks
- 2. Viva-voce - 3 marks

RECOMMENDED TEXT BOOKS:

- 1. Singh, R.L.: Fundamentals of Practical Geography, DVS Publication, Ghy
- 2. Singh, G.: Map Wok & Practical Geography, DVS Publication, Ghy
- 3. Singh, R.L.: Elements of Practical Geography, DVS Publication, Ghy
- 4. George P. Kellaway : Map Projection
- 5. J.A. Steers : Map Projection

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GGRM-503
GEOGRAPHY MAJOR- XII

REGIONAL GEOGRAPHY OF THE WORLD (PART – I)

Total Marks : 60 (48 marks for End Semester, 12 marks for Internal Assessment)

No. of Units : 3 (Each Unit carries 16 marks)

Objectives of the paper:

The basic objective of this course is to acquaint the students with the geographical aspects of the three continents i.e. Asia, North America and South America.

Course Contents:

Unit – I Asia

Marks –16
Lectures - 10

1. Physiography, climate, soil and vegetation
2. Mineral resources and industrial development
3. Distribution of population
4. Regional studies of Middle East and South East Asia

Unit – II North America

Marks –16
Lectures - 10

1. Physiography, climate, soil and vegetation
2. Mineral resources and industrial growth
3. Distribution of population
4. Agricultural belts of the USA

Unit – III South America

Marks – 16
Lectures - 10

1. Physiography, climate, soil and vegetation
2. Agriculture and Mineral resource – spatial distribution
3. Population distribution
4. Importance of Panama Canal

RECOMMENDED TEXT BOOKS:

1. Manku, D.S. : A Regional Geography of World, Kalyani Publishers
2. Gautam, A : World Geography, Sarda Pushtak Bhawan, Allahabad
3. Bradshaw, M : World Regional Geography

REFERENCE BOOKS:

1. Gourou, P. (1980) : The Tropical World, Longman, London
2. Cole, J. (1996) : A Geography of World's Major Regions, Routledge, London

GGRM-504
GEOGRAPHY MAJOR- IV

PRACTICAL
(Thematic Mapping and hypsometric analysis)

Total Marks : 40 (32 marks for End Semester, 8 marks for Internal Assessment)

No. of Units : 3 (Unit I & II carry 16 marks each and Unit III carries 8 marks)

Objectives of the paper:

This paper is designed to acquaint the students with the construction of thematic maps of India and North East India by using different socio-economic data and comparative study of the maps of pre and post independent India.

Unit – I Thematic mapping and shape index analysis of India **Marks – 16**

1. Preparation of maps showing geographical themes – minerals, forest, agriculture etc.
2. Shape index analysis – comparison of shapes of Pre and Post Independent India

Unit – II Thematic mapping of NE India **Marks – 16**

Preparation of maps showing geographical themes – soil, industries, population
minerals, forest, agriculture etc

Unit – III Practical note book and Viva-voce **Marks – 8**

1. Practical note book - 5 marks
2. Viva-voce - 3 marks

RECOMMENDED TEXT BOOKS:

1. Singh, R.L.: Fundamentals of Practical Geography, DVS Publication, Ghy
2. Singh, G.: Map Wok & Practical Geography, DVS Publication, Ghy
3. Singh, R.L.: Elements of Practical Geography, DVS Publication, Ghy

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GGRM-505
GEOGRAPHY MAJOR- XV

POLITICAL GEOGRAPHY AND GEOPOLITICAL ISSUES

Total Marks : 60 (48 marks for End Semester, 12 marks for Internal Assessment)

No. of Units : 2 (Each Unit carries 24 marks)

Objectives of the paper:

Objective of this course is to give a comprehensive idea about the political geography and important geopolitical issues. This will enhance the awareness of the students on the geopolitical aspects of the world in general and the India and NE India in particular.

Course Contents:

Unit – I Political Geography

Marks – 24

Lectures - 15

1. Definition, nature, scope and subject matter – approaches to the study of political geography : Political Geography and Geo Politics
2. States – formation, location, shape and size : Nation – state, core areas, capitals
3. Boundaries and frontiers, borderlands, buffer states, landlocked states and shatter belts : Functions and classification of international boundaries : difference between boundaries and frontiers

Unit – II Geopolitical issues

Marks – 24

Lectures - 15

1. Global strategic views – Mackinder, Spykman and Mahan
2. Geopolitical settings of India : International boundaries of India and related issues : Geopolitics of Indian Ocean
3. North – south dialogue : SAARC and ASEAN in the new international order
4. Geopolitical situations of North East India

RECOMMENDED TEXT BOOKS:

1. Dikshit, R.D.(1999) Political Geography, A contemporary perspectives, Tata McGraw, Hill, New Delhi
2. Dikshit, R.D.(1999) Political Geography, A Century of Progress, Sage, New Delhi
3. Sukhwal, B.L.(1968) Modern Political Geography of India, Sterling Publishers New Delhi
4. Adhikari, Sudipta : Political Geography, Rawat Publication, New Delhi
5. Adhikari, Sudipta : Political Geography of India, Sarada Pushtak Bhawan

REFERENCE BOOKS:

1. Alexander, L.M(1963) World Political Patterns, Ran McNally, Chicago
2. John, R.S.(1982) An Introduction to Political Geography, Routledge, London
3. Taylor, Peter(1985) Political Geography, Longman, London
4. Prescott, J.R.V (1972) Political Geography, London, Methuen & Co
5. Muir, R. (1976) Modern Political Geography, London, Macmillan
6. Hazarika, Joysankar, (1966) Geopolitics of North East India -A Strategical Study, Gyan Publishing House, New Delhi.

GGRM-506
GEOGRAPHY MAJOR- XVI

PRACTICAL
(Slope analysis and diagrams)

Total Marks : 40 (32 marks for End Semester, 8 marks for Internal Assessment)

No. of Units : 3 (Unit I & II carry 16 marks each and Unit III carries 8 marks)

Objectives of the paper:

The objective of this course is to develop skills among the students to analyze slopes by using various methods as well as to draw block diagrams by using special techniques.

Unit – I Slope analysis **Marks – 16**

1. Wentworth's Method
2. Smith's Method

Unit – II Drawing of block diagrams **Marks – 16**

1. One point perspective block diagram
2. Two point perspective block diagram

Unit – III Practical note book and Viva-voce **Marks – 8**

1. Practical note book - 5 marks
2. Viva-voce - 3 marks

RECOMMENDED TEXT BOOKS:

1. Singh, R.L.: Fundamentals of Practical Geography, DVS Publication, Ghy
2. Singh, G.: Map Wok & Practical Geography, DVS Publication, Ghy
3. Singh, R.L.: Elements of Practical Geography, DVS Publication, Ghy

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GGRM-507
GEOGRAPHY MAJOR- XVII

REGIONAL PLANNING AND SOCIAL GEOGRAPHY

Total Marks : 60 (48 marks for End Semester, 12 marks for Internal Assessment)

No. of Units : 3 (Each Unit carries 16 marks)

Objectives of the paper:

This course is aimed at to familiarize the students with the geographical factors which have a bearing on the social and regional organizations of space. This will enhance awareness among the students regarding the multi-dimensional nature of regional space and the resultant spatial structure.

Course Contents:

Unit – I Social Geography

Marks – 16

Lectures - 10

1. Meaning and scope of social geography, its development through time
2. Concept of space in social geography
3. Society and environment
4. Understanding society and culture, cultural hearth and cultural regions of the world. Concept of modernization and socio – cultural changes
5. Concept of central place and central place theory of Christaller

Unit – II Regional concept and planning

Marks – 16

Lectures - 10

1. Concept of region, types of region and methods of regionalization
2. Concept of regional planning – its relevance development and problems
3. Concept of planning regions with special reference to India macro level planning in India – concept and utility
4. Environmental planning in regional issues
5. Regional planning and sustainable development

Unit – III Regional planning strategy

Marks – 16

Lectures - 10

1. Resource base and development strategies for different regions – Punjab plain, Chotanagpur plateau, Tamil Nadu plain and NE India
2. Geographical aspects of development in Japan – agriculture, industry and planning
3. Concept of land use planning and its necessity in Indian context

RECOMMENDED TEXT BOOKS:

1. Misra R.P.(1969) Regional Planning, concepts, Techniques and Policies ,Mysore
2. Bhat.L.S(1973)Regional Planning in India,Statistical Publishing Society,Calcutta
3. Misra,R.P.et al (1974) Regional Development in India-A Strategy,Mysore
4. Taher, M. : Social Geography
5. Ahmed, A. (1999) : Social Geography, Rawat Publications
6. Jones,Emrys and John Eyles,1977 :An Introduction to Social Geography ,London

REFERENCE BOOKS:

1. Chorley,H and Hagget P.(1976): Models in Geography,Methuen,London
2. Bhat.L.S. et al (1976) Micro-level planning: A Case study of Karnal Area,Haryana.K.B.Publication,New Delhi.
3. Sundaram, K.V. (ed) : Geography and Planning, Concept Publisher
4. Raza, M. (1988) : Regional Development, Heritage Publishers
5. Mitra,A(1965) Levels of Regional Development,Census of India,Vol-I,pt I & II
New Delhi
6. Jones,Emyrs,1975 Readings in Social Geography .London
7. Singh Yogendra :Modernisation and Social change : Orient Longman

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GGRM-508
GEOGRAPHY MAJOR- XVIII

PRACTICAL
(Representation of statistical data)

Total Marks : 40 (32 marks for End Semester, 8 marks for Internal Assessment)

No. of Units : 3 (Unit I & II carry 16 marks each and Unit III carries 8 marks)

Objectives of the paper:

The objective of this course is to develop skills among the students regarding the representation of statistical data.

Unit – I Quantitative methods **Marks – 16**

1. Graphical representation of median and mode
2. Map showing co-efficient of variation

Unit – II Flow line and centrographic study **Marks – 16**

1. Traffic flow and isochronic cartogram
2. Mean centre of gravity

Unit – III Practical note book and Viva-voce **Marks – 8**

1. Practical note book - 5 marks
2. Viva-voce - 3 marks

RECOMMENDED TEXT BOOKS

1. Mahmood A,: Statistical Methods in Geography
2. Alvi,J.: Statistical Geography
3. Mishra, R.P. : Fundamentals of Cartography
4. Monkhouse, : Maps & Diagrams
5. Singh, R.L.: Fundamentals of Practical Geography, DVS Publication, Ghy
6. Singh, G.: Map Wok & Practical Geography, DVS Publication, Ghy
7. Singh, R.L.: Elements of Practical Geography, DVS Publication, Ghy

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GGRM-601
GEOGRAPHY MAJOR- XIX

MAP PROJECTIONS AND CARTOGRAPHIC METHODS

Total Marks : 60 (48 marks for End Semester, 12 marks for Internal Assessment)

No. of Units : 3 (Each Unit carries 16 marks)

Objectives of the paper:

This course is aimed at to familiarize the students with the history of map projections and methods including its development and change through time. Besides this the course is also aimed at to acquaint the students with the basic knowledge of surveying and leveling and modern cartographic methods. These will help the students in their practical studies.

Course Contents:

Unit – I Map Projections

Marks –16
Lectures - 10

1. History of development of map projections, classification and use of different types of map projections
2. Choice of map projections

Unit – II Cartographic Methods

Marks –16
Lectures - 10

1. Basic principles of surveying and their necessity in geography : Vertical and horizontal controls
2. Surveying and leveling:
 - i) Plane table surveying – different methods
 - ii) Prismatic compass surveying – closed and open traverse, calculation of included angles, correction of bearing, omitted measurement
 - iii) Theodolite traversing – measurement of heights
 - iv) Leveling – different types

Unit – III Modern Cartographic Methods

Marks –16
Lectures - 10

1. Introduction to modern techniques – air photographs and satellite imagery and their basic properties, concept of GIS and GPS and their components
2. Remote Sensing principles, components and as a tool for data generation and mapping
3. Remote Sensing platforms and sensors, Geo-stationary and Polar orbiting satellite photography, multi-spectral radar and passive microwave detectors; computer cartography

RECOMMENDED TEXT BOOKS:

1. Kanetkar, T.P. and Kulkarni : Surveying and Leveling Part – I & II
2. Zamir, A : A Text book of surveying
3. Steer J.A. : Map Projection
4. Mishra, R.P. and Ramesh : Fundamentals of Cartography
5. Singh and Patel : Principles of Remote Sensing
6. Panda, B.C. : Remote sensing – Principles and applications

REFERENCE BOOKS:

1. Singh, R.L.: Fundamentals of Practical Geography, DVS Publication, Ghy
2. Singh, G.: Map Work & Practical Geography, DVS Publication, Ghy
3. Curren, P.J. : Principles of Remote sensing
4. Robinson, : Elements of cartography, DVS Publication, Ghy
5. Arnoff S.(1989) Geographic Information System: A Management Perspective , DDL Publication,Ottawa
6. Star J and Estes (1994) Geographic Information System,An Introduction, Prentice Hall,Englewood Cliff,New Jersey

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GGRM-602
GEOGRAPHY MAJOR- XX

PRACTICAL (surveying)

Total Marks : 40 (32 marks for End Semester, 8 marks for Internal Assessment)

No. of Units : 3 (Unit I & II carry 16 marks each and Unit III carries 8 marks)

Objectives of the paper:

The objective of this course is to develop skills among the students regarding the surveying by using survey instruments.

Unit – I Survey

Marks – 16

1. Conduct survey
 - i) Dumpy's level – profile leveling, contouring
 - ii) Theodolite – measurement of heights (accessible and inaccessible cases)

Unit – II Laboratory work

Marks - 16

Laboratory works – calculations related to surveying by plane table, prismatic compass, leveling instruments and theodolite

Unit – III Practical note book and Viva-voce

Marks – 8

1. Practical note book - 5 marks
2. Viva-voce - 3 marks

RECOMMENDED TEXT BOOKS:

1. Kanetkar, T.P. and Kulkarni : Surveying and Leveling Part – I & II
2. Zamir, A : A Text book of surveying

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GGRM-603
GEOGRAPHY MAJOR- XXI

REGIONAL GEOGRAPHY OF INDIA (PART – II)

Total Marks : 60 (48 marks for End Semester, 12 marks for Internal Assessment)

No. of Units : 3 (Each Unit carries 16 marks)

Objectives of the paper:

The basic objective of this course is to give a comprehensive idea regarding the economy and socio-cultural structure of India and economy of North East India.

Course Contents:

Unit – I Agriculture, industries and transport **Marks – 16**

Lectures - 10

1. Agriculture : salient features of Indian agriculture : irrigation : sources – multipurpose river valley projects; major crops – rice, wheat, sugarcane, cotton, jute, tea and coffee – production and spatial distribution. Growth of agriculture during the plan periods – green revolution, white revolution and blue revolution
2. Industries : iron & steel, textiles and chemicals – their growth and development industrial regions of India. New industrial policy of India, industrial development during the five year plans; tourism industry.
3. Transport : road, railways, water ways, air ways – their role in regional development

Unit – II Socio – cultural structure

Marks – 16

Lectures - 10

1. Population growth and distribution, composition of population – racial, religious, linguistic, literacy, sex and economic. Scheduled castes and scheduled tribes; major tribes of India.
2. Settlement pattern : rural and urban – classification of urban places, trend of urbanization, urbanization problems
3. Integrated rural development programmes – Panchayatiraj and recentralize planning in India

Unit – III Economy of NE India

Marks – 16

Lectures - 10

1. Resource base : major minerals : coal, oil and natural gas, limestone, forest resources of NE India – spatial distribution and production
2. Agriculture : major crops – rice, jute, sugarcane and tea – spatial distribution and production, problems of agriculture
3. Industries : mineral, agro – based and forest – based industries. Cottage industries – problems & prospects of industrialization.

RECOMMENDED TEXT BOOKS:

1. Singh, R.L(ed) A Regional Geography of India,1967
2. Tiwari, R.C. : Geography of India, Prayag Pushtak Bhawan
3. Khullar : India A Comprehensive Geography , Kalyani Publishers
4. Taher, Md & Ahmed : North East India
5. Bhattacharyya, N.N. : North East India : A systematic Geography

REFERENCE BOOKS:

1. Taher & Ahmed : Assam : A Geographical Profile
2. Bhagawati, A.K et al: Geography of Assam,2000 Publication of NEIGS
3. Spate O.H.K & Learmonth, A.T.A. India and Pakistan.
4. Sutta, A.K. India; Resources, Potentialities and Planning ,1973
5. Guha & Chattaraj : A New Approach to Economic Geography

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GGRM-604
GEOGRAPHY MAJOR- XXII

PRACTICAL (Imagery interpretation)

Total Marks : 40 (32 marks for End Semester, 8 marks for Internal Assessment)

No. of Units : 3 (Unit I & II carry 16 marks each and Unit III carries 8 marks)

Objectives of the paper:

The objective of this course is to develop skills among the students regarding the use of modern techniques like interpretation and comparison of satellite imagery.

Unit – I Image interpretations **Marks – 16**

1. Interpretation of satellite imagery covering any two of the following aspects:

- i) Relief features
- ii) Forest cover
- iii) Drainage and water bodies
- iv) Settlements

Unit – II Satellite image comparisons **Marks – 16**

1. Comparison of satellite imagery features with toposheet

Unit – III Practical note book and Viva-voce **Marks – 8**

1. Practical note book - 5 marks
2. Viva-voce - 3 marks

RECOMMENDED TEXT BOOKS:

1. Singh and Patel : Principles of Remote Sensing
2. Panda, B.C. : Remote sensing – Principles and applications
3. Lillisand et.al. : Remote Sensing and Image Interpretation

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GGRM-605
GEOGRAPHY MAJOR- XXIII

REGIONAL GEOGRAPHY OF THE WORLD (PART – II)

Total Marks : 60 (48 marks for End Semester, 12 marks for Internal Assessment)

No. of Units : 3 (Each Unit carries 16 marks)

Objectives of the paper:

The basic objective of this course is to acquaint the students with the geographical aspects of the three continents i.e. Africa, Australia and New Zealand and Europe.

Course Contents:

Unit – I Africa

Marks –16
Lectures - 10

1. Physiography, climate, soil, vegetation
2. Natural resources of the continent
3. Spatial distribution of population

Unit – II Australia and New Zealand

Marks –16
Lectures - 10

1. Physiography, climate, soil, vegetation
2. Natural resources and industrial growth
3. Population distribution

Unit – III Europe

Marks –16
Lectures - 10

1. Physiography, climate, soil, vegetation
2. Natural resources, mineral resources and industrial development
3. Regional study of Mediterranean region – physiography, climate, soil, vegetation, agriculture and industry

RECOMMENDED TEXT BOOKS:

1. Manku, D.S. : A Regional Geography of World, Kalyani Publishers
2. Gautam, A : World Geography, Sarda Pushtak Bhawan, Allahabad
3. Bradshaw, M : World Regional Geography

REFERENCE BOOKS:

1. Gourou, P. (1980) : The Tropical World, Longman, London
2. Cole, J. (1996) : A Geography of World's Major Regions, Routledge, London
3. Jackson, R.H. et. Al. (1991) : World Regional Geography – Issues for Today

GGRM-606
GEOGRAPHY MAJOR- XXIV

PRACTICAL (Pattern Analysis)

Total Marks : 40 (32 marks for End Semester, 8 marks for Internal Assessment)

No. of Units : 3 (Unit I & II carry 16 marks each and Unit III carries 8 marks)

Objectives of the paper:

The objective of this course is to develop skills among the students regarding the use of modern techniques like interpretation and comparison of satellite imagery.

Unit – I Statistical Data representation Part I **Marks- 16**

1. Near neighbour analysis
2. Principle component analysis – Water, Fisher and Nelson

Unit- II Statistical Data representation Part II **Marks- 16**

1. Location quotient analysis
2. Lorenz curve

Unit – II Practical note book and Viva-voce **Marks – 8**

1. Practical note book - 5 marks
2. Viva-voce - 3 marks

RECOMMENDED TEXT BOOKS:

1. Mahmood A,: Statistical Method in Geography
2. Alvi,J.: Statistcal Geography
3. Singh, R.L.: Fundamentals of Practical Geography, DVS Publication, Ghy
4. Singh, G.: Map Wok & Practical Geography, DVS Publication, Ghy
5. Elhance, D.N., Veena Elhance and B.M. Agarwal : Fundamentals of Statistics

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GGRM-607
GEOGRAPHY MAJOR- XXV

GEOGRAPHIC THOUGHTS AND QUANTITATIVE METHODS

Total Marks : 60 (48 marks for End Semester, 12 marks for Internal Assessment)

No. of Units : 2 (Each Unit carries 24 marks)

Objectives of the paper:

The objectives of this course is to acquaint the students with the history of geographical thought through the course of time and contemporary quantitative methods and techniques used in geography in today's context.

Course Contents:

Unit – I Geographic Thoughts

Marks –24
Lectures - 15

1. Development of Geography – Classical period, Medieval period
2. Age of exploration and discovery
3. Development of Geography during modern period – contributions of Humboldt and Karl Ritter

Unit – II Quantitative methods

Marks –24
Lectures - 15

1. Quantitative methods and its application in Geographical studies
2. Measures of central tendency – Mean, Media and Mode and their application in data analysis
3. Measures of dispersion – Mean Deviation, Standard Deviation and Quartile Deviation and their utility in the study of Geographical phenomena
4. Concept of Correlation and Regression, techniques of measuring correlation and regression and their application in Geographical studies
5. Sampling and its application in Geographical studies
6. Concept of Index number – Types, methods and application
7. Theory of probability
8. Measures of inequality – Location Quotient and Lorenz Curve
9. Spatial distributions and interactions – Near Neighbour Analysis, Rank size rule, Gravity and Potential models

RECOMMENDED TEXT BOOKS:

1. Hussain, M(1984) Evolution of Geographical Thoughts
2. Adhikari, S. : Geographical Thoughts
3. Mahmood A,; Statistical Method in Geography
4. Elhance, D.N., Veena Elhance and B.M. Agarwal : Fundamentals of Statistics

REFERENCE BOOKS:

1. Ali.S.M(1966) The Geography of Puranas , Peoples' Publishing House,New Delhi
2. Alvi,J.: Statistical Geography
3. Gregory,S(1978) Statistical Methods in Geography,Longman,London
4. Hammond,R, McCullagh,P.S.(1974):Quantative Techiques in Geography: An Introduction,Clarendan Press,Oxford
5. Maurice,Y (1974) An Introduction to Quantitative Analysis in Human Geography, McGraw Hill ,New York
6. Lawrence G.R.P.(1968) Cartographic Methods, Methun,London

GGRM-608
GEOGRAPHY MAJOR- XXVI

PRACTICAL

Total Marks : 40 (32 marks for End Semester, 8 marks for Internal Assessment)

No. of Units : 3 (Unit I & II carry 16 marks each and Unit III carries 8 marks)

Objectives of the paper:

The objective of this course is to develop skills among the students regarding the use of modern statistical techniques like hypsometric and bathymetric curves and their analyses and project report writing

Unit – I Hypsometric analysis

Marks – 12

Drawing of hypsometric and bathymetric curves and their analyses

Unit – II Project report

Marks - 20

Visit an area and identify the landforms, settlements, land use pattern, socio – economic conditions etc of the area and prepare a report on the Area visited

Unit – III Practical note book and Viva-voce

Marks – 8

1. Practical note book - 5 marks
2. Viva-voce - 3 marks

RECOMMENDED TEXT BOOKS:

1. Singh, R.L.: Fundamentals of Practical Geography, DVS Publication, Ghy
2. Singh, G.: Map Wok & Practical Geography, DVS Publication, Ghy
3. Singh, R.L.: Elements of Practical Geography, DVS Publication, Ghy

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