

Syllabus for Undergraduate Programme

BA / B.Sc. GEOGRAPHY



Manipur University, Canchipur

Imphal-795003

Manipur University
Canchipur, Imphal

Syllabus for B.A/B.Sc. Geography (Semester System)

1st Year	Semester-I			<i>Marks</i>
	GG: E101	: Introduction to Geography		100
	Semester-II			
	GG: E202	: Physical Geography		100
2nd Year	Semester-III			
	GG: E303 (i)	: Human Geography	50	
	GG: E303 (ii)P	: Cartography-I	50	100
	Semester-IV			
	GG:E404 (i)	: Population and Settlement Geography	50	
	GG:E404 (ii)P	: Cartography-II	50	100
3rd Year	Semester-V			
	GG:H505	: Geomorphology		100
	GG:H506	: Geography of India		100
	GG:H507(P)	: Cartography-III		100
	Semester-VI			
	GG:H608	: Economic Geography		100
GG:H609	: World Regional Geography		100	
GG:H610(P)	: Cartography-IV		100	
		Total		1000

B.A/B.Sc. 1st Year
First Semester

GG: E101 : Introduction to Geography

100 Marks

Unit – I: Nature of geography, emergence of geography as a subject, geography and other disciplines **20 marks**

Unit – II: Contributions of Greek and Arab geographers, contribution of German and French geographers. **20 marks**

Unit – III: Geography as the study of environment, man-environment relationship, determinism, possibilism, neo-determinism; Dualism in geography – systematic-regional, physical-human, branches of geography. **20 marks**

Unit – IV: Geography as human ecology; Areal differentiation and spatial organization; Concept of region – macro, meso and micro; Recent trends of study geography in India **20 marks**

Unit – V: Cartography and its history; Importance of quantitative techniques; Remote sensing and GIS, field works – Physical and socio-economic surveys in geography. **20 marks**

Suggested Readings:

1. Abler, Ronald.F. et.al *Geography's Inner Worlds: Pervasive themes in Contemporary American Geography*, Routledge New Jersey, 1992
2. Dikshit R.D.: *The Arts, Science of Geography integrated Readings*, Prentice Hall of India. NewDelhi, 1994.
3. Dikshit R.D.: *Geographical Thought- A Contextual History of Ideas*, Prentice Hall of India Pvt.Ltd.2000.
4. Dohrs, F.E. and Sommers, L.W.(eds.) *Introduction to Geography*. Thomas Y. Crowell Co, New York, 1967.
5. Hartshorne, Richard: *Perspective on the Nature of Geography*, Rand McNally and Co., Chicago, 1959.
6. Harvey, David: *Explanation in Geography*, Edward-Arnold, London, 1972.
7. Holt-Jensen, A.: *Geography: Its History and Concepts*, Longmans, 1980.
8. Husain, Majid: *Evolution of Geographical Thought*, Rawat Publicantions, Jaipur, 1984.
9. James, PE.: *All Possible Worlds. A History of Geographical Ideas*, Sachin Publication, Jaipur. 1980.
10. Johnston, R.J. and Claval, P.(eds.): *Geography Since the Second World War*, Croom Helm, London/Bernes and Bable, N.J., 1984.
11. Jones, P.A.: *Field work in Geography*, Longmans, 1968.
12. Lownsbury, J.F. and Aldrich, F.T.: *Introduction to Geographical Methods and Techniques*. Charles Marrill, Columbus, 1979.
13. Minshull, R.: *The Changing Nature of Geography*. Hutchinson University Library. London, 1970.
14. Wooldridge, S.W.: *The Geographer As Scientist*, Thomas Nelson and sons Ltd., London, 1956.
15. Singh, R.L.: *Elements of Practical Geography*, Kalyani Pub, New Delhi. 1969.
16. R.P. Misra: *Fundamentals of Cartography*, Prasaranga, University of Mysore, 1969
17. Barrett E.C. and Curtis: *Fundamental of Remote Sensing and Air Photo Interpretation*, McMillan, NewYork. 1992.

BA/BSc. 1st Year
Second Semester
GG: E202 Physical Geography

100 Marks

Unit – I: The Solar system and origin of earth; Rocks – their origin and classification; Interior of the earth; Earth movements – organic and epeirogenic; Earthquakes and volcanoes, major land forms **20 marks**

Unit – II: Weathering, factors affecting weathering; Concepts of cycle of erosion; works of running water, wind and glaciers; Karst and coastal regions; Drainage patterns, lakes and islands. **20 marks**

Unit – III: Elements of weather and climate; Composition and structure of the atmosphere; Insolation, heat budget, vertical, horizontal and seasonal distribution of temperature. **20 marks**

Unit – IV: Atmospheric pressure and winds, planetary, periodic and local winds, evaporation, condensation and precipitation; Cyclones and anticyclones; Climatic types and their association with major natural regions. **20 marks**

Unit – V: Configuration of ocean floor, Temperature and salinity distribution of ocean water; Ocean currents, marine deposits, Coral and atolls; Global distribution of major plant and animal communities; Concept of ecosystem and food chain. **20 marks**

Suggested Reading:

1. Ahmed Enyat: *Geomorphology*, Kalyani Publishers, New Delhi, 2001.
2. Blomm A.L: *Geomorphology- A Systematic Analysis of late Canezoic landforms*, Prentice Hall Englewood Cliffs, N.J. 1978
3. Dayal, P.: *A text book of Geomorphology*, Sukla Book Deport, Patna 1996
4. Critchfield, H.: *General Climatology*, Prentice-Hall, New York,1975
5. Monkhouse, F.J.: *Principles of Physical geography*
6. Sharma, R.C. and Vatal, M.: *Oceanography for Geographers*
7. Strahler, A.N. & Strahler A.H: *Modern Physical Geography*, John Wiley & Sons revised edition, 1992
8. Kale, V .S. and Gupta, A. : *Introduction to Geomorphology*, Orient Longman, Kolkata. 2001.
9. Thornbury. W.D.: *Principles of Geomorphology*, Wiley Eastern,1969
10. Wooldridge, S.W. and Morgan, R.S.: *An Outline of Geomorphology: The Physical Basis of Geography-An Outline of Geomorphology. Longman Green & Co, London 1959.*

BA/BSc. 2nd Year
Third Semester
GG: E303 (i) Human Geography

50 Marks

Unit. – I: Nature and scope of human geography, branches of human geography, approaches to the study of human geography: Primitive life style of mankind and subsequent migration
15 marks

Unit – II: Division of mankind : spatial distribution of racial and linguistic groups; Human adaptation to the environment (i) cold region – Eskimo, (ii) hot region – Bushman (iii) plateau – Gonds, (iv) mountain – Gujjars, nomads and (v) natural hazards.
20 marks

Unit – III: Economic activities of mankind: food gathering, human, fishing, vegiculture, shifting cultivation; Economic activities in modern society – industry, transport and agriculture, trade and commerce.
15 marks

Suggested Readings:

1. Bergwan, Edward E: *Human Geography: Culture, Connections and landscape*, Prentice Hall, New Jersey, 1995.
2. Carr, M.: *Patterns, Process and Change in Human Geography*, MacMillan Education, London, 1987.
3. Fellman, J.L.: *Human Geography-Landscapes of Human Activities*, Brown and Benchman Pub., U.S.A.1997
4. DeBlijH.J.: *Human Geography, Culture Society and Space*, John Wiley, New York, 1996.
5. Johnston, R.J. (editor): *Dictionary of Human Geography*, Blackwell, Oxford, 1994.
6. Mc Bride, P.J.: *Human Geography Systems, Patterns and Change in Human Geography*. Nelsen, U.K. and Canada, 1996.
7. Michael, Can: *New Patterns: Process and Change in Human Geography Nelson*, 1997.
8. Peter Daniels, Michael B.Denis S.and James, S: *Human Geography*, Pearson Education, Delhi, 2003.
9. Rubenstein, J.H. and Bacon R.S.: *The cultural Landscape-an Introduction to Human Geography*, Prentice hall, India, New Delhi, 1990.
10. Singh, K.N.: *People of India, An introduction*, Seagull Books, 1992.
11. Majid Husain: *Human Geography*, Rawat Publication. Jaipur, 2003
12. UNDP: *Human Development Report*, Oxford University Press, 2001

GG: E303 (ii)P Cartography-I

50 Marks

Unit – I: Scale: representative fraction, plain linear, diagonal and comparative; Identification of rocks and minerals, fibers and crops.

10 Marks

Unit – II: Methods of showing relief-hachure, shading, contours and layer tints; Representation of different landforms by contours; Drawing of profiles-cross and long profiles, superimposed, projected and composite profiles and their relevance in landform mapping and analysis.

15 Marks

Unit – III: Representation of temperature and rainfall data by line and bar graphs. Drawing of climograph and hythergraph and their interpretation; Interpretation of Indian weather maps for July and January months; Reading of meteorological instruments- maximum & minimum thermometers, wet & dry thermometers, rain gauge, barometer, wind vane and anemometer.

15 Marks

Record book

05 Marks

Viva- Voce

05 Marks

Note: Questions are to be set according to the marks allotted to units at the time of examination

Suggested Readings:

1. Lawrence, G.R.P.: *Cartographic Methods*, Methuen, London, 1968.
2. Monkhouse, F.J. & Wilkinson, H.R.: *Maps and Diagrams*, Methuen, London, 1994.
3. Robinson A.H.: *Elements of Cartography*, John Wiley & Sons, Newyork, 1998 (fifth edition).
4. Singh, R.L.: *Elements of Practical Geography*, Kalyani Pub., New Delhi.1969.
5. R.P. Misra: *Fundamentals of Cartography*, Prasaranga, University of Mysore,1969
6. Raisz, Erwin: *Principles of Cartography*, Mc Graw-Hill, Newyork, 1962.

BA/BSc. 2nd Year
Fourth Semester
GG: E404 (i) Population and Settlement Geography

50 Marks

Unit – I: Nature and scope of population geography, world population growth, density and distribution; Composition of population: age and sex, rural and urban, economic composition, fertility and mortality with reference to India; Migration – Internal and international; Population problems and policies with reference to India.

25 Marks

Unit – II: Nature and scope of settlement geography, evolution of settlements; spatial distribution and associated factors; Settlements of rural and urban.

10 Marks

Unit – III: Types and patterns of rural settlements, distribution of rural settlements, morphology, urbanization trends in the world, functional classification of towns, urban problems and planning.

15 Marks

Suggested Readings:

1. Bose Ashish et al: *Population in India's Development (1947-2000)*, Vikas, New Delhi, 1974.
2. Chandna R.C.: *Geography of Population*, Kalyani Pub, New Delhi, 2000.
3. Chandna r.C.: *Geography of Population: Concept, Determinants and Patterns*, Kalyani, New Delhi, 2000.
4. Clarke John I: *Population Geography*, Pergamon Press, Oxford 1973.
5. Crook, Nigel: *Principles of Population and Development*, Pergamon Press, N.Y. 1977.
6. Garnier B.J.: *Geography of Population*, Longman, London 1970.
7. Mamoria C.B.: *India's Population Problem*, Kitab Mahal, New Delhi 1981.
8. Mitra Ashok: *India's Population: Heading Towards a Billion*, B.R. Publ. Corp. 1991.
9. Srinivasan K.V. and M.B. Vlassoff: *Population Development Nexus in India: Challenges for the Millenium*, Tata Mc Graw Hill, New Delhi 2001.
10. Sundaram K.V. and Sudesh Nangia (Ed): *Population Geography*, Heritage, Delhi 1986.
11. UNDP: *Human Development Report*, Oxford University Press, Oxford 2000.
12. Wood R.: *Population Analysis in Geography*, Longman, London, 1979.
13. Carter H.: *The Study of Urban Geography*, Edward Arnold, London, 1972.
14. Rao, VLSP: *Urbanization in India: Spatial Dimensions*, Concept Publication. New Delhi. 1996
15. Singh, R.L. & Singh, K.N. (eds): *Readings in Rural Settlement*, BHU, Varanasi.
16. Singh, R.Y: *Geography of Settlements*, Rawat, Jaipur, 1998
17. Singh, R.L. & Singh, K.N.(eds): *Readings in Rural Settlement*, BHU, Varanasi.

GG: E404(ii)P Cartography – II

50 Marks

Unit – I: Cartographic symbols and their uses: Points-dots, proportional circles and spheres, lines-isopleths and flow lines, areas- choropleth. Use of line and bar graphs for representing population, agriculture, industry and transport data. **15 Marks**

Unit – II: Mean, median, mode, standard deviation, correlation coefficient. **10 Marks**

Unit – III: Representation of population distribution, density and growth, land use, cropping pattern, industries and transport by cartographic techniques other than line and bar graphs. Interpretation of Survey of India (SOI) topo-sheets of an area in respect of (i) relief, (ii) drainage, (iii) settlement and (iv) communication pattern. **15 Marks**

Record book **5 Marks**

Viva-voce **5 Marks**

Note: Question are to be set according to the marks allotted to units at the time of examination.

Suggested Readings:

1. Monk house, F.J.: *Maps and Diagrams*, Methun & Co Ltd., London, 1971
2. Raize, Erwin. *Principals of Cartography*: Me Graw Hill, New york, 1982.
3. Elhance, D.N.: *Fundamental of Statistics*, Kitab Mahal, Allahabad, 1972.
4. Robinson A.H. and sale R.D.: *Elements of Cartography*, John Wiley, New Jersey, 1953.
5. Singh, R.L.: *Elements of Practical Geography*, Kalyani Publishers, New Delhi, 1979
6. Birch, T.W.: *Maps: Topographical and Statistical*, Clarendon Press, Oxford, 1949.
7. R.P. Misra: *Fundamentals of Cartography*, Prasaranga, University of Mysore, 1969.
8. Aslam Md.: *Statistical Method in Geographical Studies*, Rajesh Publication, New Delhi, 1976.
9. Pal, S.K.: *Statistics for geoscientists-Techniques and Applications*, Concept, New Delhi, 1998.
10. Gregory S: *Statistical Methods and the Geographer*, Longman S. London, 1963

BS/BSc. 3rd Year
Fifth Semester
GG: H505 Geomorphology

100 Marks

- Unit – I: The nature, scope and concepts of geomorphology; Relationship of geomorphology with other branches of earth sciences; Geological time scale. **20 Marks**
- Unit – II: Earth's interior, Wegener's theory of Continental drift, Plate Tectonics; Earth movements – organic and epeirogenic; Types of folds and faults, isostasy, earthquakes and volcanoes, types of mountains. **20 Marks**
- Unit – III: Rocks and minerals – origin and composition of rocks, classification of rocks; Weathering, formation of regolith and soils, rocks and relief. **20 Marks**
- Unit – IV: Geomorphic agents and processes, erosion, transportation and deposition; Mass wasting; Evolution of landscape, Concept of cycle of erosion, interruption to cycle of erosion, fluvial, arid, glacial, karst and coastal landscapes. **20 Marks**
- Unit – V: Applied geomorphology: settlements, transport, land-use, mining, resource evaluation, environmental and assessment. **20 Marks**

Suggested Readings:

1. Dayal, P: *A Textbook of Geomorphology*, Shukla Book deports, Patna, 1996.
2. Dury, G.H. : essays in Geomorphology, Heinmann, London, 1966.
3. Ernst, W.G.: *Earth I systems-Process and Issues*, Cambridge University Press, 2000.
4. ICSSR: *A Survey of Research in Physical Geography*, Concept, New Delhi, 1983.
5. Kale V. and Gupta, A: *Element of Geomorphology*, Oxford University Press, Calcutta, 2001.
6. Monkhouse, F.J.: *Principles of Physical geography*, Hodder and Stoughton, London, 1960.
7. Pitty. A.: *Introduction of Geomorphology*, Methuen, London, 1974.
8. Sharma, H.S.: *Tropical Geomorphology*, Concept, New Delhi, 1987.
9. Singh, S.: *Geomorphology*, Prayag Pustak Bhawan, Allahabad, 1998.
10. Small. R.J.: *The Study of Landforms*, Mc Graw Hill, New York, 1985.
11. Sparks, B.W.: *Geomorphology*, Longmans, London, 1960.
12. Steers, J.A.: *The Unstable Earth. Some Recent Views in Geography*, Kalyani Publishers, New Delhi, 1964.
13. Strahler, A.N.: *Environmental Geo-Science*, Hamilton Publishing, Santa Barbara, 1973.
14. Strahler, A.N. and Strahler, A.H.: *Modern Physical Geography*, John Wiley & Sons, revised edition 1992.
15. Sumnerfield, M.A.: *Global Geomorphology*, Longman, 1991.
16. Thornbury, W.D.: *Principles of Geomorphology*, Wiley Eastern, 1969.
17. Wooldridge, S.W. and Morgan, R.S.: *The Physical Basis of Geography-An Outline of Geomorphology*, Longman Green & Co., London, 1959.
18. Wooldrige, S.W.: *The Geographer as Scientist*, Thornas Nelson and Sons Ltd. London, 1956.
19. Holmes. A: *Principles of Physical Geology*. ELBS/VanNostrand Reinhold, 1978 (third edition)

GG: H506 Geography of India

100 Marks

Unit – I: India in the context of South and South East Asia; India: a land of unity and diversity; Structure and relief, drainage, climate and vegetation, natural regions. **20 Marks**

Unit – II: Agriculture and agricultural development planning, mineral and power resources. The status of their use and need for conservation; Location and distribution of iron and steel, textile, petrochemical, cement and forest based industries. **20 Marks**

Unit – III: Transport and communication, trade and commerce, basis of regional divisions of India – macro, meso and micro – regions of India and planning. **20 Marks**

Unit – IV: North East India: structure and relief, climate soils and natural vegetation, resource utilization, population structure and settlement patterns. **20 Marks**

Unit – V: Manipur: structure and relief, drainage, climate, soils and natural vegetation, agriculture, mineral and power resources, population, tribes, settlements. **20 Marks**

Suggested Readings:

1. .D: *India-A Regional Interpretation*, Northern Book Centre, New Delhi, 1992.
2. Farmer, B.H.: *An Introduction to South Asia*, Methuen, London, 1983.
3. Govt. of India: *India-Reference Annual*, 2001 Pub. Div. New Delhi, 2001.
4. Govt. of India: *National Atlas of India*, NATMO Publication Division, New Delhi, 1965.
5. Govt. of India: *The Gazetteer of India*. Vol. I & III, Publication division, New Delhi, 1965.
6. Learmonth. A.T.A. et.al(ed): *Man and Land of South Asia*, Concept, New Delhi.
7. Mitra, A.: *Levels of Regional Development India*, Census of India, Vol. I, Part I-A(i) and (ii) New Delhi, 1967.
8. P.Nag and P.Roy: *Geography of India*, Concept Publication, New Delhi, 1998.
9. Shafi, M.: *Geography of South Asia*, Mc Millan & Co., Calcutta, 2000.
10. Singh, R.L(ed): *India: A Regional Geography*, National Geographical Society. India, Varanasi, 1971.
11. Spate, O.H.K. and Learmonth, A.R.A.: *India and Pakistan: Land, People and Economy*, Methuen & Co., London, 1967.
12. Valdiya, K.S.: *Dynamic Himalaya*, University Press, Hyderabad, 1998.
13. Wadia, D.N.: *Geology of India*, Mc Millan & Co., London, 1967.
14. Kullar. D.: *India-A Comprehensive Geography*, Kalyani Publishers, New Delhi, 2000
15. Singh, R.P.: *Geography of Manipur*, NBT, NewDelhi
16. Taher, M & Ahmed, P.; *Geography of North East India*, Mani-Manil Prakash, Guwahati, 2000
17. Ansari S.A: *Economic Geography of Manipur*, Trio Book House, Imphal

GG: H507 P Cartography – III

100 Marks

Unit – I: Preparation of cross and longitudinal profiles of streams; preparation of average slope map, block diagram, area height curve, hypsometric curve and drainage frequency and density map. **20 Marks**

Unit – II: Interpretation of geological maps and drawing of geological sections to show the sequence and relationships of structure with relief. **15 Marks**

Unit – III: Basic principles of land surveying (i) chain and tape, (ii) prismatic compass and (iv) plane table surveying – radiation, intersection and three point problem. **20 Marks**

Unit – IV: Map projection: general principles, classification; Draw graticules on the following projections by graphical / mathematical methods with suitable outline maps and their properties and uses: Zinithal orthographic, Stereographic, Equal area and Equidistant projections. **15 Marks**

Unit – V: Map projection : Conical -Bond's, Polyconic and International projections; Cylindrical-Marcator's, Gall's and Mollweide projections(construction of suitable outline maps by graphical/mathematical methods and properties and uses of the projections). **15 Marks**

Record book **7 Marks**

Viva-voce **8 Marks**

Note: Questions are to be set according to the marks allotted to units at the time of examination.

Suggested Readings:

1. Monkhouse, F.J.: *Maps and Diagrams*, Methuen & Co Ltd., London, 1971.
2. Nag.P.: *Thematic Cartography and Remote-Sensing*, concept publication, New Delhi, 1953.
3. Raize, Erwin. *Principals of Cartography*: Mc Graw Hill, New york, 1982.
4. Robinson A.H. and sale R.D.: *Elements of Cartography*, John Wiley and sons, New Jersey, 1985
5. Singh, R.L.: *Elements of Practical Geography*, Kalyani Publishers, NewDelhi, 1979
6. R.P. Misra: *Fundamentals of Cartography*, Prasaranga, University of Mysore, 1969
7. Gopal Singh: *Map Work and Practical Geography*, Vikas Publishing House Pvt. Ltd., New Delhi, 1996
8. Pal, S.K.: *Statistics for geoscientists-Techniques and Applications*, Concept, New Delhi, 1998.
9. Steers, J.A.: *Map Projections*, University of London Press, London.

BA/BSc. 3rd Year
Six Semester
GG: H608 Economic Geography

100 Marks

Unit – I: Definition, nature, scope and recent trends in Economic Geography, its relations with economics and allied subjects, sectors of economy -primary, secondary, tertiary and quaternary. **20 Marks**

Unit – II: Natural resources: Renewable and non-renewable, biotic and abiotic, conservation of resources; Agriculture – factors of crop production, major food crops and cash crops of the world. **20 Marks**

Unit – III: Minerals and Industries: classification of minerals and their world distribution; Industries: factors of localization; Major industries – iron and steel, textile, chemicals, cements, paper, ship building, small scale and cottage industries. **20 Marks**

Unit – IV: Trade and Transport: geographical factors in their development, water, land and air transport, internal and international trade. **20 Marks**

Unit – V: Global distribution and concentration of quaternary activities; Disparity between developed and developing countries; India's position in quaternary sector, Impact of globalization and India's economy, role of multinational companies and rise of IT industries in India. **20 Marks**

Suggested Readings:

1. Boesch, H.: *A Geography of World Economy*, D.Van Nostrand Co., New York, 1964.
2. Chapman, J.D.: *Geography and Energy*, Longman, London, 1989.
3. Gregor, H.F.: *Geography of Agriculture*, Prentice Hall, New Jersey, USA. 1970
4. Griggs, D.B.: *The Agricultural Systems of the World*, Cambridge University Press, New York, 1974.
5. Gordon L. Clark, Maryann, P. F. and Meric, S.G.: *The Oxford Handbook of Economic Geography*, Oxford University Press, New York, 2000.
6. Hartshorne, T.N. and Alexander, J.W.: *Economic Geography*, Prentice Hall, New Delhi, 1986
7. Ones, C.F. and Darkenwald, G.G.: *Economic Geography*, Mc Millan Co., New York, 1975.
8. Millar E.: *Geography of Manufacturing*, Prentice Hall, New York, 1962.
9. Raza. M and Agrawal, Y.: *Transport Geography of India*, Concept, New Delhi, 1986.
10. Smith, D.M.: *Industrial Location-An Economic Geographical analysis*, John Wiley, New York, 1971
11. Thomas, R.S.: *The Geography of Economic Activities*, Mc Graw Hill, New York, 1962.
12. Alexander, J.W.: *Economic Geography*, Prentice hall, 1974.
13. Berry, B.JL, et at.: *Global Economy*, Prentice hall Englewood Cliffs, New Jersey, 1993.
14. Boesch, H: *A Geography of World Economy*, D.Van Nostrand Co., New York, 1964.
15. Cryson, J. Henry, N., Keeble D. and Martin, R.: *The Economic Geography Reader*, John Wiley & Sons Ltd., Chichester, 2004.
16. Jones, C.F. and Darkenwald, G.G.: *Economic Geography*, Mc Milan Co., New York, 1975.
17. Lee, R. And Wills J.: *Geographies of Economies*, Arnold, London, 1997.
18. Leong G.C. and Nmorgen, G.C: *Human and Economic Geography*, Oxford University Press, London, 1982

GG: H-609: World Regional Geography

100 Marks

Unit – I: Asia-Terrain, pattern, drainage, climate, natural vegetation, soils, spatial distribution of population and economic base of the continent in general; Regional studies of south and south-east Asia. **35 Marks**

Unit – II: Europe- Physical, economic and demographic characteristics of the continent; Regional studies of British Isles and European Union. **20 Marks**

Unit – III: North and North America- Physical, economic and demographic setup; Regional studies of USA and Brazil. **15 Marks**

Unit – IV: Australia and New Zealand and Pacific islands – Physical, economic and demographic set up. **15 Marks**

Unit – V: Africa- Physical, economic and demographic setup. **15 Marks**

Suggested Readings:

1. Cole, J.: *A Geography of the World's Major Regions*, Routledge, London, 1996.
2. Cole, J.P.: *Latin America-Economic and Social Geography*, Butterworth USA, 1975.
3. DeBlij, H.J.: *Geography: Regions and Concepts*, John Wiley, New York, 1994.
4. Dickenson, J.P. et al.: *The Geography of the Third World*, Routledge, London, 1996.
5. Dourou, P.: *The Tropical World*, Longman, London, 1980.
6. Jackson, R.H. and Hudman, L.E.: *World Regional Geography: Issues for Today*, John Willey, New York, 1991.
7. Kolh, A.: *East Asia-Geography of a Cultural Region*. Mathuen, London, 1977.
8. Minshull, G.N.: *Western Europe*, Hodlard & Stoughton, New York, 1984.
9. Patterson, J.H.: *Geography of Canada and the United States*, Oxford University Press, 1985.
10. Songquiao, Z.: *Geography of China*, John Wiley, New York, 1994
11. Ward, P.W. and Miller, A.: *World Regional Geography: A Question of Place*, John Wiley, New York, 1989.

Note: Internet sources may be used for the areas for which books are not available.

GG: H610 P Cartography – IV

100 Marks

Unit – I: Dumpy level for preparation of road and contouring and theodolite for measurement of heights and distances **20 Marks**

Unit – II: Remote sensing : orientation of aerial photographs under mirror stereoscope, determination of photo scale, identification of objects from the aerial photographs, preparation of base map from the aerial photographs, visual interpretation of satellite imagery for drainage and land use mapping; Introduction to GIS and GPS.
25 Marks

Unit – III: Field work and field report under the guidance of teachers: select any area near the institution or elsewhere, collect topo sheets of the area 1:50,000 scale or satellite. Image, visit the area and identify the land forms, settlement, land use features and compare the same with the topo sheets and / or satellite image, draw sketches and maps of the selected area; conduct field survey and prepare field report. **40 Marks**

Record book **7 Marks**

Viva-voce **8 Marks**

Note: Question are to be set according to the marks allotted to units at the time of examination.

Suggested Readings:

1. American Society of photogrammetry: *Manual of remote Sensing*, ASP, Falls Church. V.A. 1983.
2. Barrett E.C. and Curtis: *Fundamental of Remote Sensing and Air Photo Interpretation*. McMillan, New York, 1992.
3. Jefreys, S and John E.: *Geographic Information System- An Introduction*, prentice Hall. New Jersey, 1990.
4. Jones, P.A: *Field Work in Geography*, Longman, London, 1968
5. Luder D: *Aerial Photography Interpretation: Principles and Application*, McGraw Hill, New York, 1959
6. Monk house, F.J.: *Maps and Diagrams*, Methuen, London, 1967.
7. Nag.P.: *Thematic Cartography and Remote-Sensing*, Concept publication, New Delhi, 1953.
8. Raizel.I.: *Principals of Cartography*: Me Graw Hill, New York, 1982.
9. Kanitkar, T.P.: *Surveying and Leveling*, Roorkee University, Roorkee, 1965
10. Robinson A.H. and sale R.D.: *Elements of Cartography*, John Wiley, New Jersey; 1953.