# GOVERNMENT OF MANIPUR MAYAI LAMBI COLLEGE

YUMNAM HUIDROM, IMPHAL WEST

**BA / BSc Syllabus** 

**DEPARTMENT OF GEOGRAPHY** 

### Syllabus for Under Graduate Programme

BA / B.Sc. GEOGRAPHY



Manipur University, Canchipur Imphal-795003

# Manipur University Canchipur, Imphal

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

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

- 1. Abler, Ronald.F. et.al *Geography's Inner Worlds: Pervasive themes in Contemporary American Geography*, Routledge New Jersey, 1992
- 2. DikshitR.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 Helrn, London/Bernes and Bable, N.J., 1984.
- 11. Jones, P.A.: Field work in Geography, Longmans, 1968.
- 12. Lownsburg, 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** 

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

100 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. 2<sup>nd</sup> 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, vegeculture, shifting cultivation; Economic activities in modern society – industry, transport and agriculture, trade and commerce.

15 marks

- 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

- 1. Lawarence, 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. 2<sup>nd</sup> 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

- 1. Bose Ashish etal: 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, NewDelhi 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 200I.
- 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, Vanarasi.
- 16. Singh, R.Y: Geography of Settlements, Rawat, Jaipur, 1998
- 17. Singh, R.L. & Singh, K.N.(eds): Readings in Rural Settlement, BHU, Vanarasi.

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.

- 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. 3<sup>rd</sup> 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

- 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 <sup>1</sup> 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. Summerfield, 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)

- 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

- 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.

- 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. 3<sup>rd</sup> 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

- 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., NewYork, 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, BJL, 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

- 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 at.: 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, Hoddard & 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.* 

- 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.

- 1. American Society of photogrammettry: *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. RaizeI.: 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.