

# MANIPUR UNIVERSITY

## Canchipur, Imphal

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

			<i>Marks</i>	
<b>1<sup>st</sup> Year:</b>	<b>Semester –I</b>			
	GG: E101 : Introduction to Geography	100		
	<b>Semester- II</b>			
	GG:E202 : Physical Geography	100		
<b>2<sup>nd</sup> Year</b>	<b>Semester- III</b>			
	GG:E303(i) : Human Geography	50		
	GG:E303(ii) : Cartography-I		50	100
	<b>Semester –IV</b>			
	GG:404(i) : Population and Settlement Geography	50		
	GG:404(ii) : Cartography-II		50	100
<b>3<sup>rd</sup> Year</b>	<b>Semester- V</b>			
	GG:H505 : Geomorphology	100		
	GG:H506 : Geography of India	100		
	GG: H507(P) : Cartography- III	100		
	<b>Semester-VI</b>			
	GG:H608 : Economic Geography			100
	GG:H609 : World Regional Geography	100		
	GG:H610(p) : Cartography-IV			100
<b>Total</b>	<b>1000</b>			

**BA/BSc. 1<sup>ST</sup> Year****First Semester****GG:E101 :Introduction to Geography**

100 Marks

<b>Unit-I</b>	Nature of geography, emergence of geography as a subject, geography and other disciplines	20 Marks
<b>Unit-II</b>	Contribution of Greek and Arab geographers, contribution of German and French geographers.	20 marks
<b>Unit-III</b>	Geography as the study of environment, man- environment relationship, determinism, possibilism, neo-determinism; Dualism in geography- systemic-regional, physical-human, branches of geography	20 Marks
<b>Unit-IV</b>	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
<b>Unit-V</b>	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, New Delhi. 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 Publications, Jaipur, 1984.
9. James, P.E. : *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.: *Fieldwork in Geography*, Longmans, 1968.
12. Lownsburg, J.F. and Aldrich, F.T.: *Introduction of Geographical Methods and Techniques*, Charles Marril, 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*, Prasaraanga, University of Mysore, 1969.
17. Barrett E.C.: AND Curtis: *Fundamental of Remote Sensing and Air Photo Interpretation*, McMillan, New York, 1992.

**B.A./B.Sc.1<sup>st</sup> 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 landforms. 20 Marks
- Unit-II**      Weathering, factor affecting weathering; Concept 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, Corals 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, - Systematic Analysis of Late Canezoic landforms*, Prentice Hall Englewood Cliffs, N.J. 1978.
3. Dayal, P.: *A textbook of Geomorphology*, Sukla Book Depot, 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 editikon, 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 ofGgeography – An Outline of Geomorphology*, Longman Green & Co., London 1959.

**B.A./B. Sc. 2<sup>nd</sup> Year**  
**Third Semester**

**GG:E303 (i) Human Geography**

50 Marks

<b>Unit-I</b>	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
<b>Unit-II</b>	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
<b>Unit-III</b>	Economic activities of mankind: food gathering, hunting, fishing, vageculture, 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, Connection 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. DEbLIJ h.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. M.C. Bride, p.J.: *Human Geography Systems, Patterns and Change in Human Geography*, Nelson, U.K. and Canada.1996.
7. Michael, Can: *New Patterns: process and change in Human Geogaphy*, 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, Dew 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 Developme3nt Report*, Oxford University Press, 2001.

**G.G:E 303(ii)P Cartography-I**

50 Marks

<b>Unit I</b>	Scale: representative fraction, Plain linear, diagonal and comparative; Identification of rocks and minerals, fibres and crops.	10 Marks
<b>Unit II</b>	Methods of showing relief-hachure, shading, contours and layer tints Representation of different landforms by contours; Drawing of profiles – cross and long profiles, uperimposed, projected and composite profiles and their relevance in Landform mapping and analysis.	15 Marks
<b>Unit III</b>	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 metrological instruments- maximum and minimum thermometers, wet & dry thermometers , rainguage, barometer, wind vane and anemometer.	15 Marks
<b>Record book</b>		05marks
<b>Viva-voce</b>		05marks

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

**Suggested Readings:**

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 Publisher., New Delhi. 1969.
5. R.P. Mishra: *Fundamentals of Cartography*, Prasaraa, university of Mysore, 1969.
6. Raisz, Erwin: *Principles of Cartography*, Mc Graw-Hill, New York, 1962.

**B.A/B.Sc. 2<sup>nd</sup> Year**  
**Fourth Semester****G.G: 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; Growth of urban 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. Chandana R.C.: *Geography of population*, Kalyani Pub, New Delhi, 2000.
3. Chandana 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. And M.B. Vlassoff : *Population Development Nexus in India: Challenges for the Millennium*, Tata Mc Graw hill, New Delhi. 2001.
10. Sundaram K.V. and Suresh 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 of 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); *Reading in Rural Settlement*, BHU, Varanasi.

**GG : E404 (ii)P      Cartography-II**

50 Marks

<b>Unit I:</b>	Cartographic Symbols and their uses: points dots, Proportional circles and spheres, lines-isopleths and flow line, areas- choropleth. Use of line and Bar graphs for representing population, agriculture, industry and transport data.	15 Marks
<b>Unit II:</b>	Mean, Median, Mode, Standard Deviation, Correlation Coefficient.	10 Marks
<b>Unit III:</b>	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	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. Monk house, F.J: *Maps and diagrams*, Methun & Co Ltd., London, 1971.
2. Raize, Erwin. : *Principles of cartography* : Me Graw Hill, Newyork, 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*, Prasaraanga, 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.

**B.A/BSc 3<sup>rd</sup> Year**  
**Fifth Semester**

**GG:H505      Geomorphology**

100 Marks

<b>Unit-I</b>	The Nature, scope and concepts of geomorphology; Relation of geomorphology with other branches of earth sciences; Geological time of scale.	20 Marks
<b>Unit-II</b>	Earth's interior, Wegener's theory of continental drift, Plate Tectonics; Earth movements – orogenic and epeirogenesis; Types of folds and faults, isostasy, earthquakes and volcanoes, types of mountains.	20 Marks
<b>Units-III</b>	Rocks and minerals - origin and composition of rocks, classification of rocks; Weathering, formation of regolith and soils, rocks and relief.	20 Marks
<b>Unit-IV</b>	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
<b>Unit –V</b>	Applied geomorphology : settlements, transport, land-use, mining, resource evaluation, environmental and assessment.	20 Marks

**Suggested Reading:**

1. Dayal, P: *A Text book of Geomorphology*, Shukla Book depot, Patna, 1996.
2. Dury, G.H. : *essays in Geomorphology*, Heinmann, London, 1966.
3. Ernst, W.G.: *Earth 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. Pitrtty. A.: *Introduction of Geomorphology*, Methuen, London. 1974.
8. Sharma, H.S.: *Tropical Geomorphology*, Concept, New Delhi.1987.
9. Small, R.J.: *The study of landforms*, Mc Graw Hill, New York. 1985.
10. Sparks, B.W.: *Geomorphology*, Longmans, London. 1960
11. Singh, S.: *Geomorphology*, Prayag Pustak Bhawan, Allahabad. 1998.
12. Steers, J.A.: *The unstable Earth. Some Recent Views in Geography*, Kalyani Publishers, Nesw 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. Su mmerfield, M.A.: *Global Geomorphology*, Longman, 1991.
16. Thornbury, W.D.: *Principle 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*, Thomas Nelson and Sons Ltd. London, 1956.
19. Holmes, A: *principles of Physical Geology*, ELBS/ Van Nostrand Reinhold, 1978 (third edition)



**GG:H506      Geography of India**

100 Marks

<b>Unit-I</b>	India in the context of south and south east Asia; India: a land of unity and diversity; structure of relief, drainage, climate and vegetation, natural regions.	20 Marks
<b>Unit-II</b>	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
<b>Unit-III</b>	Transport and Communication, trade and commerce, basis of regional division of India- macro meso and micro – regions of India and planning.	20 Marks
<b>Unit-IV</b>	North East of India : structure and relief, climate soils and natural vegetation, resource utilization, population structure and settlement patterns.	20 Marks
<b>Unit-V</b>	Manipur : Structure and relief, Drainage, climate, soils and natural vegetation, agriculture, mineral and power resources, population, tribes, settlements	20 Marks

**Suggested Readings:**

1. Deshpade C.D: *India –A Regional Interpretation*, Northern Block 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. Mitra, A.: *Levels of Regional Development India*, Census of India, Vol. I, Part I-A(i) and (ii) New Delhi, 1967.
7. P. Nag and P. Roy : *Geography of India*, Concept Publication, New Delhi, 1998.
8. Shafi, M.: *Geography of south Asia*, Mc Millan & Co., Calcutta, 2000.
9. Singh, R.L(ed): *India : A Regional Geography*, National Geographical society. India Varanasi,1971  
Spate, O.H.K. And Lear Month, A.R.A.: *India and Pzakistan: Land, People and Economy*, Methuen & Co., London, 1967
10. Valdi ya, K.S: *Dynamic Himalaya*, University Press, Hyderabad, 1998.
11. Wadia, D.N: *Geology of India*, Mcmillan & Co., London, 1967.
12. Kullar, D.: *India- A Comprehensive Geography*, Kalyani Publishers, New Delhi, 2000.
13. Singh, R.P: *Geography of Manipur*, NBT, New Delhi
14. Teher, M & Ahmed, P.: *Geography of north East India*, Mani-Manil Prakash, Guwahati, 2000.
15. Ansari S.A.: *Economic Geography of Manipur*, Trio Book House, Imphal.

**GG:H507 P Cartography – III**

100 Marks

<b>Unit I:</b>	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
<b>Unit II:</b>	Interpretation of geological maps and drawing of Geological sections to show the sequence and relationships of structure with relief.	15 Marks
<b>Unit III:</b>	Basic principles of Land surveying(i) chain and tape, (iii) prismatic compass and (iv) Plane Table Surveying- radiation, intersection and three point problem.	20 Marks
<b>Unit IV:</b>	Map projection: general principles, classification; draw graticules on the following ojections by graphical/ mathematical methods with suitable outline map and their properties and uses ; Zenithal orthographic, Stereographic, Equal area and Equidistant projections	15 Marks
<b>Unit V:</b>	Map projection : Conical- Bonnd'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 Reading:

1. Monk house, F.J.: *Maps and diagrams*, Mathuen & Co Ltd., London, 1971.
2. Nag.P.: *Thematic Cartography and Remote- Sensing*, concept publication, New Delhi, 1953
3. Raize, Erwin.: *Principles of Cartography*: Mc Graw hill, Newyork, 1982.
4. Robinson a.h. and sale R.D.: *Elements of Cartography*, john Wiley and sons, NewJersey, 1985
5. Singh, R.L.: *Elements of Practical geography*, Kalyani Publishers, New Delhi, 1979.
6. R.P. Mishra: *Fundamentals of Cartography*, Prasaraanga, 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 – technique and Applications*, Concept, New Delhi, 1998.
9. Steers, J.A.: *Map Projections.*, university of London Press, London.

**BA/BSc. 3<sup>rd</sup> Year**  
**Sixth Semester**

**GG:H608      Economic Geography**

100 Marks

<b>Unit-I</b>	Definition, nature, scope and recent trends in economic Geography, its relations with economics and allied subjects, sectors of economy- primary, secondary, tertiary and quaternary.	20marks
<b>Unit-II</b>	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
<b>Unit-III</b>	Minerals and Industries: classification of minerals and their world distribution; Industries: factors of localization; Major industries- iron and steel, textile, chemicals, cement, paper, ship building, small scale and cottage industries.	20 Marks
<b>Unit-IV</b>	Trade and Transport: geographical factors in their development, water, land and air transport, internal and international trade.	20 Marks.
<b>Unit-V</b>	Global distribution and concentration of quaternary activities; Disparity between develop and developing countries; India's position in quaternary sector, Impact of globalization and India's economy, role of multinational companies and rise of IT industry in India.	20 Marks

**Suggested Readings:**

1. Boesch, H.A.: *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 System of the World*, Cambridge University Press, New York, 1974.
- Gordon L. Clark, Maryann, P.F. and Meric, S.G.: *The Oxford Handbook of Economic Geography*, Oxford University Press, New York, 2000.
5. Hartshorne, T.N.: and Alexander, J.W.: *Economic Geography*, Prentice Hall, New Delhi. 1986.
6. Ones, C.F. and Darkenwald, G.G.: *Economic Geography*, McMillan Co., New York, 1975.
7. Millar E.: *Geography of Manufacturing*, Prentice Hall, New York, 1962.
8. Raza. M and Agrawal, Y.: *Transport geography of India*, Concept, New Delhi, 1986.
9. Smith, D.M.: *Industrial Location- An Economic Geographical analysis*, John Wiley, New York, 1971.
10. Thomas, R.S. : *The Geography of Economic Activities*, McGraw Hill, New York, 1962.
11. Alexander, J.W.: *Economic Geography*, Prentice Hall, 1974.
12. Berry, B.J.L, et at.: *Global Economy*, prentice Hall Englandwood Cliffs, New Jersey, 1993.
13. Boesch, H.A *Geography of World Economy*, D.Van Nostrand Co., New York, 1964 Cryson, J. Henery, N., Keeble D. And Martin, R.: *The Economic Geography Reader*, John Wiley & Sons Ltd., Chichester, 2004.
14. Jones, C.f. and Darkenwald, G.G.: *Economic Geography*, Mc Millan Co., New York, 1975.
15. Lee, R. And Wills J.: *Geographies of Economies*, Arnold, London, 1997. Leong G.C. and Nmorgen, G.: *Human and Economic Geography*, Oxford University Press, London, 1082.

**GG: H-609 : World Regional Geography**

Marks 100

<b>Unit I:</b>	Asia- Terrain, pattern, drainage, climate, natural vegetation, soil, and spatial distribution of population and economic base of the continent in general; Regional studies of south and south-east Asia.	35 Marks
<b>Unit II :</b>	Europe- Physical, economic and demographic characteristics of the continent; Regional studies of British isles and European Union.	20 Marks
<b>Unit III:</b>	North and North America-Physical, economic and demographic setup; Regional studies of USA and Brazil.	15 Marks
<b>Unit IV:</b>	Australia and New Zealand and specific islands- Physical, economic and demographic setup.	15Marks
<b>Unit V:</b>	Africa- Physical, economic and demographic setup.	15 Marks

## Suggested Reading :

1. Cole, J.: *A Geography of the World's Major Regions*, Routledge, London, 1996.
2. Cole, J.P.: *Latin America and Social Geography*, Butterworth USA, 1975.
3. DeBlij, H.J.: *Geography; Regional 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 Human, L.E.: *World Regional Geography: Issues for today*, John Wiley, 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 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 :H 610 P Cartography- IV**

100 Marks

- Unit I:** Dumpy Level for Preparation of road profile and contouring and theodolite for measurement of heights and distances. 20 Marks
- Unit II:** Remote sensing : orientation of areal photographs under mirror stereoscope, determination of photo scale, identification of objects from the areal photographs, preparation of base map from the areal 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 landforms, 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: Questions 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 V.A. 1983 Barrett E.C. and Curtis : *Fundamental of Remote Sensing and Air Photo Interpretation*, McMillan, New York, 1992. Jefreys, S and John E. : *Geographic Information System- An Introduction*, Prentice Hall, New Jersey, 1990.
2. Johns, P.A; *Field work in Geography*, Longman, London,1964. Luder D : *Arial Photography Interpretation: Principles and Application*, McGraw Hill, New York, 1959.
3. Monk House, F.J.: *Maps and Diagrams*, Methuen, London,1968.
4. Nag. P.: *Thematic Cartography and Remote- Sensing*, Concept Publication, New Delhi, 1953.
5. Raize I.: *Principles of Cartography*: Me Graw Hill, New York, 1982.
6. Kanitkar, T.P.: *Surveying and Levelling*, Rookee University, Roorkee, 1965.
7. Robinson A.H. and sale R.D.: *Elements of Cartography*, John Wiley, New Jersy,1953.

**BA/BSc 3<sup>rd</sup> Year Geography (General)**  
**Fifth Semester****GG:G505(i)      Geomorphology**

75 Marks

- Unit- I:** Nature and scope of geomorphology, development of geomorphic idea, Approaches to the study of geomorphology; Theories of Continental drift Isostasy, tetrahedral and plate tectonic. 30 marks
- Unit-II:** Exogenic processes: concept of gradation, agents and processes of gradation; mountain building, classification of mountains; Geomorphic cycle, interruptions and movement of base level and its expression in landforms development. 30 Marks
- Unit-III:** Hydrological cycle, runoff, evaporation and percolation, Water table, and underground water; drainage system and pattern. 15 marks

**Suggested Readings:**

1. Chorley, R.J. ;Spatial Analysis in Geomorphology, Methuen, 1972.
2. Dayal.P: *A Text book of Geomorphology*, Shukula Book Depot, Patana, 1996. Gamer, H.F.: *The Origine of Landscape- A Synthesis of Geomorphology*, Oxford University Press, London, 1974.
3. Kale V. And Gupta, A : *Element of Geomorphology*, Oxford University press, Calcutta, 2001.
4. Mitchell, C.W.: *Terrain Evaluation*, Longman, London, 1973.
5. Singh, S. *Geomorphology*, Prayag Publication, Allahabad, 1998.
6. Small, R.J.: *The study of Landforms*, Mc Graw Hill, New York, 1985.
7. Thornbury, W.D. : *Principles of Geomorphology*, Wiley Eastern, 1969. Wooldridge,S.W. and Morgan, R.S.: *The Physical Basis of Geography – An Outline of geomorphology*, Longman Green & Co., London, 1959.

**GG:G506(ii)P Cartography – III**

25 Marks

- Unit I** Preparation of drainages frequency and density map; Interpretation of conformity and unconformity geological maps by drawing of geological sections 8 Marks
- Unit II** Map Projection : Draw graticules on the following projections by graphical mathematical methods with suitable outline maps with their properties and uses. 9 marks
- (a) Zenithel Stereographic and orthographic
  - (b) Single cylindrical and Cylindrical equal area.
  - (c) Mercator's and Mollweide projections.
- Unit III** Record book  
And viva-voce (4+4)=8 marks

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

**Suggested Readings:**

1. Misra, R.P.: *Fundamentals of Cartography*, Prasaranga, University of Mysore, 1969
2. Monkhouse, F.J. & Wilkinson, H.R.: *Maps and Diagrams*, Methuen & Co Ltd., London, 1971
3. Raize I.: *Principles of Cartography* : Me Graw Hill, New York, 1982.
4. Robinson A.H. and sale R.D. : *Elements of Cartography*, Jhon Wiley, New Jersy, 1953
5. Singh R.L.: *Elements of Practical Geography*, Kalyani Publishers, New Delhi, 1979.

**BA/BSc, 3<sup>rd</sup> Year Geography (General)**  
**Sixth Semester**

**GG:G 607 (i) Regional Geography of India**

75 Marks

- Unit I:** India in the context of south and South East Asia; structure and relief, drainage, climate and vegetation, population Characteristics, agriculture, location and type of industries, mineral and power resources. 35 Marks
- Unit II:** North East India – structure and relief, climate, natural vegetation, resource utilization of forest, agriculture, mineral, power, population, tribes and settlement pattern of rural and urban. 20 Marks
- Unit III:** Manipur – Relief features, climate, soil and natural vegetation, agriculture, forest, power, transport, minerals, population, rural and urban settlements. 20 Marks.

**Suggested Readings:**

1. Ansari S.A: *Economic Geography of Manipur*, Trio Book House, Imphal.
2. Bhattacharyya, N.N.: *North East India: A systematic Geography*, New Delhi, Rajesh Publications, 2005.
3. Dickenson, J.P. et al.: *The Geography of the World*, Routledge, London, 1996.
4. Ganguly, J.B.: *Urbanization in the North Eastern Region: Trends and policy Implications*, New Delhi, Deep and deep publications 1995.
5. Jackson, R.H and Hudman, L.E: *World Regional Geography: Issues For Today*, John Wiley, New York, 1991.
6. Kolh, A.: *East Asia- Geography of a cultural Region*. Methuen, London, 1977.
7. Songquiao, Z.: *Geography of China*, John Wiley, New York, 1994.
8. Singh R.L(ed): *India: A Regional Geography*, National Geographical Society. India, Varanasi, 1971.
9. Spate, O.H.K. and Learmonth, A.R.: *India and Pakistan: Land, People and Economy*, Methuen & Co., London, 1967.
10. Valdiya, K.S.: *Dynamic Himalaya*, University Press, Hyderabad, 1998.
11. Wadia, D. N.: *Geology of India*, McMillan & Co., London 1967.
12. Kullar, D.: *India a Comprehensive Geography*, Kalyani Publishers, New Delhi. 2000.
13. Singh R.P.: *Geography of Manipur*, NBT, New Delhi.
14. Taher, M & Ahmed, P.: *Geography of North East India*, Mani-Manil Prakash, Guwahati, 2000



**GG: G507(P)Cartography-IV**

25 Marks.

<b>Unit I:</b>	Surveying: Chain and tape, Plane table and Prismatic compass.	7 Marks
Unit II:	Field study report based on collected data from the Field by the students under the guidance of teachers.	10 Marks.
<b>Unit III:</b>	Record Book Viva Voce.	(4+4)=8 Marks.

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

**Suggested Readings:**

1. Kanitkar, T.P.: Surveying and Leveling, Roorkee University. Roorkee, 1965
2. Misra R.P.: *Research Methodology A Handbook*, Concept Publishing Company, New Delhi, 1998.
3. Robinson A.H. and Sale R.D.: *Element of Cartography*, John Wiley, New Jersey, 1953.
4. Singh R.L.: *Elements of Practical Geography*, Kalyani Publishers, New Delhi, 1979.  
Stoddard, R.H.: *Field Techniques and Research Methods in Geography*, Kendall Hunt. Publ., Dabaque, 1982.
5. Sharma, B.A.N. et. Al. *Research Methods in social sciences*, Sterling Publishers, New Delhi, 1983.