M.A./M.Sc. 3rd Semester Examination, 2010

GEOGRAPHY

COURSE NO.—GR-2304

Full Marks : 40

Time : 2 hours

The figures in the right-hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

Write the answers to questions of each Unit in separate books

OPTION – I

(*Coastal Geomorphology*)

(Special Paper)

UNIT – XXXI

(*Coastal Processes*)

[*Marks* : 20]

GROUP – A

1. Answer any *one* question of the following : 8 x 1

(*a*) Explain the mechanism rip cells development on a regular beach, identifying the factors that control rip cell spacing.

(*b*) Assess the linkage between wave characters and beach profile as a process-response system.

GROUP – B

2. Answer any *two* questions : 4 x 2

(*a*) How can the major types breakers be related to energy dissipation on the coast ?

(*b*) Discuss the major agents and processes of bioturbation in a tropical macrotidal coast.

(*c*) How does the angle of repose control beach gradient to develop a concave profile ?

(*d*) Briefly classify aqueous ripples.

GROUP – C

3. Answer any *two* questions : 2 x 2

(*a*) Define coastal zone.

(*b*) Classify breaker based on Breaking Co-efficient.

(*c*) Mention the characters of a reflective coast.

(*d*) Define oscillatory wave.

UNIT – XXXII

(*Human Impacts and Coastal Processes*)

[*Marks* : 20]

GROUP – A

1. Answer any *one* question : 8 x 1

(*a*) Narrate the significance of sea level rise and cyclones on the coasts with special reference to deltas along the Bay of Bengal.

(*b*) Explain how pre-mature land reclamations through sediment and drainage control measures (hydrologic management) have produced environmental impacts in the northern fringe of Sundarban.

GROUP – B

2. Answer any *two* questions : 4 x 2

(*a*) Discuss briefly the environmental impacts of sand mining and salt manufacturing at the coastal belt.

(*b*) Explain the concepts of coastal geo-tourism and coastal ecotourism.

(*c*) Assess the impacts of population pressure on the coastal belt.

(*d*) Identify the methods of adjustment to and measures of mitigation of Tsunami effects.

GROUP – C

3. Answer any *two* questions : 2 x 2

(*a*) What is the difference between EEZ and Territorial zone ?

(*b*) Identify the areas of CRZ-IV in India.

(*c*) What are the effects of offshore oil exploration Arabian sea coast in India ?

(*d*) What are the impacts of tourism development in the coastal belt ?

OPTION – II

(*Urban Geography and Regional Planning*)

UNIT – XXXI

(*Foundation of Urban Geography*)

[*Marks* : 20]

GROUP – A

1. Answer any *one* of the following questions : 8 x 1

(*a*) How far the Garden City model of E. Howard addresses the ecological perspectives of urban development ?

(*b*) Differentiate urbanization from urbanism and state their significance in analysing the geography of urban places.

GROUP – B

2. Answer any *two* questions from the following : 4 x 2

(*a*) Outline the spatial pattern of urbanization in India during post colonial period.

(*b*) Enumerate the recent trends and applications in urban geography.

(*c*) Categorize urban settlements as per the recent Indian Census.

(*d*) Contribution of oriental thinking in the field of urban planning science.

GROUP – C

3. Answer any *two* questions from the following : 2 x 2

(*a*) Define Gentrification.

(*b*) Distinguish metropolization from suburbanization.

(*c*) What do you mean by organic city ?

(*d*) Why is the process of counterurbanization strong in the developed world ?

UNIT – XXXII

(*Contemporary Urban Issues*)

[*Marks* : 20]

GROUP – A

1. Answer any *one* question : 8 x 1

(*a*) Explain the nature and type of activities that constitute the informal sector of an urban economy.

(*b*) Discuss briefly different aspects of air pollution and examine the present state of air pollution in metropolitan cities of India.

GROUP – B

2. Answer any *two* questions : 4 x 2

(*a*) Examine the urban poverty scenario in India.

(*b*) What do you mean by homelessness and elucidate its main causes.

(*c*) State the importance of green belt in a city landscape.

(*d*) Account for the increasing trend of metropolitan development in India during post-colonial period.

GROUP – C

3. Answer any *two* questions : 2

(*a*) Mention some processes of urban renewal.

(*b*) What is meant by green rating project ?

(*c*) What are urban squatters ?

(*d*) Specify four management strategies for ameliorating traffic congestion problems in urban areas.

OPTION – III

UNIT – XXXI

(*Physical Basis of Remote Sensing*)

[*Marks* : 20]

GROUP – A

1. Answer any *one* question : 8

(*a*) Explain the data acquisition processes with reference to energy sources and radiation principles.

(*b*) State the laws proposed by Kepler to define the orbit of satellites.

GROUP – B

2. Answer any *two* questions : 4 x 2

(*a*) State the differences between T.M and LISS-3 sensors.

(*b*) Briefly discuss the importance of different types of resolutions in image interpretation.

(*c*) Explain the significance of atmospheric scattering in Remote Sensing.

(*d*) State the standard pre- and post-processing techniques applied on satellite RS data.

GROUP – C

3. Answer any *two* questions : 2 x 2

(*a*) Classify remote sensing satellites according to their utilities.

(*b*) What is the differences between multispectral and hyperspectral data ?

(*c*) What is sunsynchronous orbit ?

(*d*) What is eccentricity of an elliptical orbit ?

UNIT – XXXII

(*Photogrammetry and Satellite System*)

[*Marks* : 20]

GROUP – A

1. Answer any *one* question : 8

(*a*) Explain the principles of height determination of an object from relief displacement.

(*b*) Explain the principles and significance of microwave remote sensing.

GROUP – B

2. Answer any *two* questions : 4

(*a*) State the key historical development of photogrammetry.

(*b*) Discuss the relative advantages and disadvantages of high oblique and low oblique aerial photographs.

(*c*) Describe the different types of resolutions.

(*d*) What are the sensor characteristics of Cartosat-2 and Quickbird satellites ?

GROUP – C

3. Answer any *two* questions : 2 x 2

(*a*) What do you mean by data enhancement ?

(*b*) Define orthorectification.

(*c*) Why vegetation is shown in red in standard FCCs ?

(*d*) How much *end lap* is essential for stereoscopic viewing ?