 PG/IIIS/GEO-304/12/Spl.Paper

M.A./M.Sc. 3rd Semester Examination, 2012

GEOGRAPHY AND ENVIRONMENT MANAGEMENT

PAPER – GEO-304

Full Marks : 40

Time : 2 hours

Write the answers to questions of each Unit in Separate Books

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

Special Paper

OPTION–I

Coastal Geomorphology

UNIT – XXXI

(*Coastal Processes*)

[*Marks* : 20]

GROUP – A

1. Answer any *one* of the following : 8 × 1

(*a*) Explain coastal zone as a process-response system.

(*b*) What are conditions for wave breaking ? Discuss with illustrations.

GROUP– B

2. Answer any *two* questions : 4 × 2

(*a*) Illustrate the formation of diurnal and semi-diurnal tide at different places on earth.

(*b*) Enumerate the association between beach gradient and wave properties.

(*c*) Explain the different types of wave-induced currents.

(*d*) Briefly classify aqueous ripples.

GROUP – C

3. Answer any *two* questions : 2 × 2

(*a*) Define relaxation time of coastal landforms.

(*b*) What is coastal cell ?

(*c*) What is "surf beat" ?

(*d*) Define co-tidal line.

UNIT – XXXII

(*Human Impacts and Coastal Processes*)

[*Marks* : 20]

GROUP – A

1. Answer any *one* question : 8 × 1

(*a*) Illustrate how the human being utilizes coasts for fishing, fish processing and salt manufacturing with a note on environmental impacts resulted by such activities on the coasts.

(*b*) Explain how far India's coastal regulations can protect over development of coasts mentioning the 2011 modifications in the CRZ acts.

GROUP– B

2. Answer any *two* questions : 4 × 2

(*a*) What is tourism environment ? How much environmental damage is acceptable for such human activities at the coast ?

(*b*) Identify the various adjustments of the Sundarban people after 'Aila' cyclone to maintain their livelihood in this hazard-prone area.

(*c*) Elucidate the environmental impacts of sea level rise at the deltaic coast.

(*d*) Discuss the causes of siltation problem in the downstream section of the Hugli River.

GROUP – C

3. Answer any *two* questions : 2 × 2

(*a*) Why population pressure is very high at the coasts ?

(*b*) What are the effects of land reclamations at the low-lying coasts ?

(*c*) What is eutrophication ?

(*d*) What is the major effect of cyclone on the coastal wetlands ?

OPTION – II

(*Urban Geography and Regional Planning*)

UNIT – XXXI

[*Marks* : 20]

GROUP – A

1. Answer any *one* of the following : 8 × 1

(*a*) How far the innovative ideas of co-ordination among buildings and spaces and architectural inventories in ancient city planning have been translated into modernity ? Analyse with examples.

(*b*) Discuss the theories of urban origin and highlight their implications in Indian urbanisation process.

GROUP – B

2. Answer any *two* of the following : 4 × 2

(*a*) How did quantitative revolution influence urban studies ?

(*b*) Distinguish between old urbanism and new urbanism as the philosophical standpoints of urban development.

(*c*) Compare the characteristic features of pre-Industrial and post-Industrial cities.

(*d*) Explain briefly the present pattern of urbanisation in West Bengal.

GROUP – C

3. Answer any *two* of the following : 2 × 2

(*a*) What do you mean by Exo-urbanisation ?

(*b*) Who were the proponents of urban ecology ?

(*c*) Differentiate urban renewal from urban redevelopment.

(*d*) What do you mean by Gentrification ?

(**Special Paper** : *Urban Geography and Regional Planning*)

UNIT – XXXII

(*Contemporary Urban Issues*)

[*Marks* : 20]

GROUP – A

1. Answer any *one* question : 8 × 1

(*a*) Bring out the features of metropolitan development taking examples from Kolkata.

(*b*) What are the main processes of growth of urban sprawt and suggest some planning measures to tackle associated problems.

GROUP – B

2. Answer any *two* questions : 4 × 2

(*a*) Explain the reasons behind formation of urban heat island with examples.

(*b*) How informal sector activities affect the urban economy in developing world ?

(*c*) What are the social consequences of urban homeless news ?

(*d*) What measures are taken by Govt. of India to eradicate urban poverty ?

GROUP – C

3. Answer any *two* questions : 2 × 2

(*a*) What is meant by "multiplier effect" in urban economics ?

(*b*) What type of satellite data product is useful for urban land use change analysis ?

(*c*) What are the consequences of congestion problems in urban area ?

(*d*) What factors are responsible for increasing urban crimes in Indian cities ?

OPTION – III

Special Paper :(*Physical basis of Remote Sensing*)

UNIT – XXXI

[*Marks* : 20]

GROUP – A

1. Answer any *one* question : 8 × 1

(*a*) Explain the Kepler's laws and its relevance/ importance in Remote Sensing Operations.

(*b*) Write down the importance of the atmosphere in different stages of Remote Sensing.

GROUP – B

2. Answer any *two* questions : 4 × 2

(*a*) Explain Kirchoff's law.

(*b*) Explain briefly different types of platforms in RS with suitable examples.

(*c*) Why the real remote sensing system is not ideal remote sensing operation ?

(*d*) Write a short note on the processing of remotely sensed data.

GROUP – C

3. Answer any *two* questions : 2 × 2

(*a*) Mention the relationships between wavelength frequency and energy.

(*b*) Mention the differences between 'Multiseasonal' and 'Multispectral' data.

(*c*) Define 'DN' value of a 'pixel' with examples.

(*d*) What do you mean by 'Hue', 'Saturation' and 'Brightness' of colour ?

UNIT – XXXII

(*Photogrammetry and Satellite Ssystems*)

[*Marks* : 20]

GROUP – A

1. Answer any *one* question : 8 × 1

(*a*) Explain the operation system and importance of whishkbroom and pushbroom scanning systems.

(*b*) Briefly discuss about different types of distortions in Remote Sensing. How distortions can be minimized?

GROUP – B

2. Answer any *two* questions : 4 × 2

(*a*) How do you determine the scale of a vertical aerial photograph ?

(*b*) Write a short note on stereoscophy.

(*c*) Distinguish between coarse resolution and fine resolution remote sensing data with examples.

(*d*) How characteristics curves are important to learn about the aerial photograph properties.

GROUP – C

3. Answer any *two* questions : 2 × 2

(*a*) What are the differences between MSS and ETMT ?

(*b*) Why are oblique aerial photographs are used ?

(*c*) What are principal point, Nadir point and isocentre in an aerial photograph ?

(*d*) Why filters are used in Remote Sensing analyses ?