

**M.A./M.Sc. 3rd Semester Examination, 2015**

**GEOGRAPHY**

**PAPER – GEO-304**

*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**

**( Special Paper : Coastal Geomorphology )**

**UNIT – 31**

**( Coastal Processes )**

**[ Marks : 20 ]**

**( Turn Over )**

GROUP – A

1. Answer any *one* question : 8 × 1

(a) Explain the mechanism of wave attenuation during its journey towards coast. How is rule of conservation of energy maintained in this process ? 5 + 3

(b) Illustrate how does intensity of long shore current depend on angle of wave approach. How does rip cell develop on regular coast ? 4 + 4

GROUP -- B

2. Answer any *two* questions : 4 × 2

(a) Elucidate coast as a process-response system.

(b) Classify wave based on mode of oscillation and particle rotation.

(c) What is difference between tide and Ebb dominated coast ?

(d) How do chenier dunes evolve ?

( 3 )

GROUP – C

3. Answer any *two* questions : 2 × 2

- (a) What is the role of beach gradient in wave breaking ?
- (b) Define edge wave.
- (c) Define 'zero plane displacement'.
- (d) What are the principle types of ripples ?

[Special Paper : *Coastal Environments* ]

UNIT – 32

( *Focus on Indian Regions* )

[ *Marks : 20* ]

GROUP – A

1. Answer any *one* from the following questions :

- (a) Explain how coastal economy and society are affected in consequence of the coastal erosion hazards of previous decades citing with the examples from West Bengal and Odisha States of India. 8 × 1

( 4 )

- (b) Discuss the origin and sediment supply of carbonate platforms fringed with the coral dominated coasts of Andaman and Nicobar group of Islands.

GROUP – B

2. Answer any *two* from the following questions : 4 × 2
- (a) Identify and explain the morphology of estuaries in reference to Hugli down stream section.
- (b) Identify the variation of beach morphology as a function of tidal range along Sundarban Estuarine Complex.
- (c) The landforms and ecosystems of wave-dominated coasts are sensitive to interference from human activity. Explain with Indian experiences.
- (d) How the coastal Ecosystems of West Bengal are being threatened by human activities ?

( 5 )

GROUP – C

3. Answer any *two* from the following questions :
- (a) Define Beach rocks. 2 × 2
- (b) Differentiate between Swamps and Mudflats of Estuarine lowland.
- (c) In which CRZ division Sundarban Tiger Reserve belongs and why ?
- (d) What is the significance of Hazard Zonation along the coasts ?

[Special Paper : Urban ]

UNIT – 31

( *Foundation of Urban Geography* )

[Marks : 20 ]

GROUP – A

1. Answer any *one* question : 8 × 1
- (a) Point out the contribution of E. Howard to modern concepts of Urban Planning and Management.

( 6 )

- (b) Mention the background that led to the emergence of new towns and trace their development in different countries in the post-industrial era.

GROUP – B

2. Answer any *two* questions : 4 × 2

- (a) Comment on the structural and functional features of National Urban system.
- (b) Highlight principles related to planning for sustainable urban development.
- (c) Analyse the importance of urbanism in urban planning.
- (d) Explain the concept of smart cities initiated in the present planning efforts.

GROUP – C

3. Answer any *two* questions : 2 × 2

- (a) Differentiate statutory town from Census town.

( 7 )

- (b) Bring out the relationship between new cities and gated communities.
- (c) State the approaches to planning for social city.
- (d) Differentiate urban landuse from urban ecology.

UNIT – 32

( *Contemporary Urban Issues* )

[ Marks : 20 ]

GROUP – A

1. Answer any *one* question : 8 × 1

- (a) How rural-urban interaction around the metropolises promotes regional development ?
- (b) What do you mean by urban sociology ? Enumerate the contribution of Karl Marx and E. Durkheim in this respect.

GROUP – B

2. Answer any *two* from the following : 4 × 2
- (a) Identify the major causes of homelessness in the urban areas of developed countries.
  - (b) How far social stratification is linked to territorial segregation of social groups in an urban area ? Give examples.
  - (c) What are the principal features of transnational cities ?
  - (d) Enumerate the impact of private transport on mass transit in urban areas.

GROUP – C

3. Answer any *two* from the following : 2 × 2
- (a) What is 'hub-culture' ?
  - (b) What are the effects of tertiarization on developing economics ?
  - (c) What is urban Canyon ?
  - (d) What is meant by the city's foot print ?



( 9 )

[Special Paper : RS & GIS ]

UNIT – 31

( *Physical Basis of Remote Sensing* )

[Marks : 20 ]

GROUP – A

1. Answer any *one* question : 8 × 1

(a) What do you mean by Electromagnetic spectrum ? Determine the relationship among the wavelength, frequency and the energy content of a photon.

(b) Write a brief note on satellite remote sensing data acquisition data product, and data dissemination.

GROUP – B

2. Answer any *two* questions : 4 × 2

(a) What do you mean by the thermal properties of terrain ?

( 10 )

- (b) Write down the different parameters for the selection of the remote sensing sensor and how such parameters determine the resolution of a sensor.
- (c) Mention different types of Satellites based upon their orbital characteristics and write down their importance.
- (d) Briefly explain the energy interactions with the terrain.

GROUP – C

3. Answer any *two* questions : 2 × 2

- (a) What do you mean by atmospheric window ?
- (b) Write down the difference between Black body radiation and Gray body radiation.
- (c) Write a short note on charge-coupled device (CCD).
- (d) Explain briefly the Kepler's second law of orbital movement of a satellite.