

2014

M.A./M.Sc.

4th Semester Examination

GEOGRAPHY

PAPER—GEO-404

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

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

Write the answers of each Unit in separate books.

Special Paper

OPTION—I

[Coastal Management]

Unit—XLIII

(Coastal Ecology and Hazards)

Group—A

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

- (a) Account for the Characteristics of 'G' and 'O' state the global sea level. Elucidate the mechanism of medium term sea level change. 5+3

(Turn Over)

- (b) Account for the stresses experienced by dune vegetations. How is biomass productivity changes with age of dune? 5+3

Group—B

2. Answer any *two* questions : 2×4
- (a) Explain, with illustration, the process of measuring costal erosion using Bruun's model. 4
- (b) Classify cyclones using IMD nomenclature. 4
- (c) Enumerate favourable environment for better development of sea weeds. 4
- (d) Explain the methods of monitoring wave properties at open coast. 4

Group—C

3. Answer any *two* questions : 2×2
- (a) Mention the physical roles of help community. 2
- (b) Mention the factors determining zonation pattern of mangrove. 2
- (c) What do you mean by '*reproduction through vegetative cloning*'? 2
- (d) Briefly mention the role of Department of Geography & Environment Management in coastal studies in West Bengal. 2

Unit—XLIV
(Coastal Management)

Group—A

1. Answer any *one* question : 1×8
- (a) Discuss about the concepts and various techniques of Integrated Coastal Zone Management.
 - (b) Explain the techniques and objectives for monitoring surface waters in Coastal Regulatory Zone.

Group—B

2. Answer any *two* questions : 2×4
- (a) Explain the management of coastal erosion in West Bengal.
 - (b) How far the coastal regulations can protect the coastal environment dominated by mangroves and coral reefs in India.
 - (c) 'Global climate change can produce coastal chaos in the tropics' — explain with examples.
 - (d) Explain the coastal drainage problems of the Sundarban resulted from land reclamations.

Group—C

3. Answer any *two* questions : 2×2
- (a) Explain the violations of CRZ in Puri Coast.
 - (b) How can remote sensing technique be effectively used for fishing activities ? Give examples.
 - (c) What are the negative effects of sea wall structure adopted along the shoreline ?
 - (d) Justify the role of CRZ-III in coastal resource management.

OPTION—II**[Urban Geography & Regional Planning]****Unit—XLIII*****(Theoretical basis of Regional Planning)*****Group—A**

1. Answer any *one* of the following : 1×8
- (a) Discuss the important features of the Agropolitan Development strategy and comment on its applicability in developing countries.

- (b) Explain the regional development perspective in the light of David Slater's theory and to what extent it is different from Frank's concept.

Group—B

2. Answer any *two* questions of the following : 2×4
- (a) Differentiate regional disparity from regional diversity.
- (b) Account for the factors responsible for unbalanced growth in developing countries.
- (c) Distinguish between growth pole and growth foci.
- (d) Highlight the major coastal erosion problems in West Bengal with special reference to Digha and Shankarpur Coastal belt.

Group—C

3. Answer any *two* questions of the following : 2×2
- (a) What are the principal shortcomings of Growth pole theory in today's context?
- (b) Bring out the significance of Basic Needs Approach in rural development.
- (c) What do you understand by 'Agglomeration Economics'?
- (d) Give reasons for frequent occurrence of flood in certain parts of Paschim and Purba Medinipur districts.

Unit—XLIV**(Planning for Regional Development)****Group—A**

1. Answer any *one* question of the following : 1×8
- (a) Critically discuss the perspectives and policies of rural planning in India.
 - (b) Discuss the role of Urban development programmes taken up by Govt. of India to improve the quality of life in Urban areas.

Group—B

2. Answer any *two* questions of the following : 2×4
- (a) Account for the major steps taken up for agricultural improvement to meet the food crisis in India since Fourth Five Year Plan.
 - (b) Distinguish between Intra and Inter regional Planning.
 - (c) Give a brief account of the role of small and medium scale industries for regional development.
 - (d) What are the salient features of PMGSY?

Group—C

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

- (a) What are the major objectives of IRDP?
- (b) What do you understand by underdeveloped economy?
- (c) State the importance of land reforms in rural development in India?
- (d) What do you mean by regional inequality?

OPTION—III**[Remote Sensing and GIS]****Unit—XLIII****(Advanced Remote Sensing)****Group—A**

1. Answer any *one* question : 1×8

- (a) How range resolution and azimuth resolution determine the spatial resolution in side looking radar (SLR) system? 8
- (b) Briefly discuss about the different preprocessing methods in digital image processing. 8

Group—B

2. Answer any *two* questions of the following : 2×4
- (a) Mention the name and utility of thermal sensors for the Generation of earth surface information and resource monitoring. 4
- (b) Write down the difference between multispectral and hyperspectral data. 4
- (c) What are the applications of passive microwave remote sensing in geographical studies? 4
- (d) Write short note on the contrast enhancement techniques. 4

Group—C

3. Answer any *two* questions : 2×2
- (a) Identify the major disadvantages of microwave remote sensing. 2
- (b) Distinguish between point operations and local operations. 2
- (c) What do you mean by NDVI? 2
- (d) What is a digital image? 2

Unit—XLIV**(Application of Remote Sensing and GIS)****Group—A**

1. Answer any *one* question : 1×8
- (a) What are the different types of Geographic data and how Geographic data are structured in GIS environment ?
 - (b) Critically evaluate Analog/visual, Digital and 'on-screen' interpretation techniques of RS data with special reference to land use/land cover classification.

Group—B

2. Answer any *two* questions of the following : 2×4
- (a) Briefly discuss the applications of overlay analysis in Geography with suitable example.
 - (b) Why GIS is different from other types of Information System ?
 - (c) Discuss on the importance of lineaments and 'geomorphic anomalies' in water resources management.
 - (d) What are the different segments of GPS and their importance to generate the locational information ?

Group—C

3. Answer any *two* questions : 2×2

- (a) What types of topology are used for 'river' and 'road network' themes?
 - (b) What is the significance of 'Open Source GIS'?
 - (c) Mention the difference between DTM and DEM.
 - (d) Difference between GPS and DGPS.
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