M.A/M.Sc 4th Semester Examination, 2011

GEOGRAPHY

PAPER — GR-2404

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 — 1

Special Paper : [Coastal Management]

UNIT—XLIII

(*Coastal Ecology*)

[*Marks* : 20]

GROUP—A

1. Answer any *one* question : 8 ×

 (a) Explain the impact of sealevel rise on coast with special reference to coastal erosion and barrier migration.

 (b) Elucidate the nature of tropical cyclones over Bay of Bengal during past 100 years.

GROUP—B

2. Answer any *two* questions : 4 ×

 (a) Briefly describe the techniques for monitoring wave direction.

 (b) Draw a schematic cross-section along a typical coastal dune of Medinipur showing floral characteristics.

 (c) Explain the mechanism of sealevel change as proposed by Walcot, 1972.

 (d) Assess the role of Marine Wings of GSI, in coastal study in India.

GROUP—C

Answer any *two* questions :   2 × 2

(a) Distinguish between depressions, cyclonic storms and sever cyclonic storms as per India Meterological Department criteria.

(b) Discuss the photographic techniques for wave velocity monitoring.

(c) Identify the difference in tidal velocity at open and estuarine coast.

(d) Mention the difficulties of installing artificial sea weed.

UNIT—XLIV

(*Coastal Management*)

[*Marks* : 20]

GROUP—A

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

(a) Discuss the significance and characters of coastal regulations with reference to India.

(b) Explain the various monitoring methods of surface water in Coastal Regulatory Zones.

GROUP—B

2. Answer any *two* questions : 4 × 2

(a) Explain the concept of Integrated Coastal Zone Management.

(b) What is the role of capacity building activities of stakeholders in different coastal occupations as part of Integrated Coastal Zone Management ?

(c) How far the application of Remote Sensing technology can help to increase the production of fishes in the coastal zone ?

(d) What are the effects of mass tourism in the coastal belt of Digha and Mondermoni ?

GROUP—C

3. Answer any *two* questions : 2 × 2

(a) Why cadastral maps are to be utilised for delineating HWL and LWL as per 2011 CRZ notification.

(b) Assess the efficiency of the groyne structure at Digha Mohana.

(c) Why 'geo-tube' engineering structure did not last in Shankarpur Coast ?

(d) Comment on the under height embankment as the only solution to adjust with the coastal floodings in reclaimed Sundarban.

OPTION—2

Special Paper : [Urban Geography and Regional Planning]

UNIT—XLIII

(*Theoretical Bases of Regional Planning*)

[*Marks* : 20]

GROUP—A

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

(a) Critically analyse Frank's theory on dependency of colonial economies.

(*Turn Over*)

(b) Examine the consequences of unbalanced growth on regional economy.

GROUP—B

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

(a) Explain the relevance of 'agropolitan development' as a model for agrarian economies.

(b) Specify the major shortcomings of urban industrial growth pole strategies.

(c) Explain the process of cumulative causation in terms of spread and back wash effects.

(d) Write a short note on the problem of coastal erosion in Medinipur.

GROUP—C

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

(a) Specify the salient features of Economic Space.

(b) Highlight the principles of Basic Need Approach as proposed E.A.J. Johnson.

(c) What is meant by Balanced Growth?

(d) Identify and give reasons for the areas of Medinipur affected by salinization.

UNIT—XLIV

(*Planning for Regional Development*)

[*Marks*: 20]

GROUP—A

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

(a) Highlight the challenges before development of underdeveloped economy.

(b) Discuss the major policies drawn for the development of rural areas in India.

GROUP—B

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

   (a) Give a brief account of the structure of Panchyati Raj System in India.

   (b) Discuss the impact of the policy of liberalisation on regional development in India.

   (c) Why there is a need for synchronization of the strategies adopted at different tiers of multi-level planning ?

   (d) Bring out the basic premises of "Urban Renewal Mission".

GROUP—C

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

   (a) What do you mean by basic and non basic activities ?

   (b) What are the different facets of community development ?

   (c) Explain the term 'multiplier effect'.

   (d) What are the strategic differences between intra- and inter-regional planning ?

OPTION — 3

Special Paper : [Remote Sensing and Geographic Information System]

UNIT—XLIII

(*Advanced Remote Sensing*)

[*Marks* : 20]

GROUP—A

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

   (*a*) Briefly discuss the properties and sensor utility of Thermal Imaging Systems.

   (*b*) Discuss the principles and areas of application of thermal remote sensing.

GROUP—B

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

   (*a*) What are the basic characteristics of multispectral and hyperspectral remote sensing ?

   (*b*) Discuss briefly about the real aperture or brute force radar system and synthetic aperture radar system.

(c) What are the preprocessing tasks employed before digital image analysis?

(d) Discuss about the training set and supervised image classification.

GROUP—C

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

(a) What is Meta data concept in DIP ?

(b) What is Sonar ?

(c) What is image enhancement ?

(d) What is Speckle ?

UNIT—XLIV

(*Application of Remote Sensing and GIS*)

[*Marks* : 20]

GROUP—A

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

(a) Define GIS and discuss in brief the various components and functions of GIS.

(b) Give an overview on the use of high resolution satellite images for urban landuse mapping and planning with special reference to IRS series of satellites.

GROUP—B

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

   (a) How do you represent geographic features of the earth's surface in GIS environment ?

   (b) Briefly discuss the vector and raster data structures for storing geographic information.

   (c) What are the different segments of Global Positioning System ?

   (d) Make a comparative assessment of aerial photograph and satellite imagery in representing geographical information.

GROUP—C

3. Answer any *two* questions :   2 x

   (a) Distinguish between DBMS and RDBMS.

   (b) What do you mean by overlay analysis ?

   (c) What are the sensor characteristics of Resource sat-1 ?

   (d) Mention four names of GIS softwares.