M.A./M.Sc. 4th Semester Examination, 2015

GEOGRAPHY

PAPER — GEO-404

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 Management*]

UNIT — XLIII

(*Coastal Ecology and Hazard*)

(2)

GROUP – A

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

   (*a*) Assess the physical and ecological roles of seaweeds. How far artificial seaweeds are efficient to check coastal erosion ? 5 + 3

   (*b*) Discuss the factors responsible for the development of mangrove zonation. Assess the impacts of sea-level change on mangrove vegetation. 4 + 4

GROUP – B

2. Answer any *two* questions : 4 × 2

   (*a*) Discuss the salient characteristics of Holocene sea level curve with special reference to the last 100 years.

   (*b*) Enumerate the relative contributions of different factors responsible for sea level change.

   (*c*) How does a dwarf plant develop in inner part of mangrove forest ?

(*d*) Describe the reproductive adaptations of Ammophila arenaria.

GROUP – C

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

(*a*) Why are biomass production rate and turbulence positively related in Kelp community ?

(*b*) What are the roles of dune-building plants ?

(*c*) Why is vivapary seen in mangroves ?

(*d*) Define 'Severe Cyclonic Storm'.

UNIT – XLIV

(Coastal Management : *Human Effects*)

GROUP – A

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

(*a*) Discuss the various erosion control measures and their sustainability in the coastal belt of West Bengal.

(b) Explain the methods and significance of CRZ mapping currently prepared by INSTITUTE OF ENVIRONMENTAL STUDIES AND WETLAND MANAGEMENT (IESWM), Kolkata under the guidelines of ICZM in India.

GROUP — B

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

(a) Identify the different activities of ICZM in West Bengal Coast.

(b) Explain the significance of monitoring surface waters in Coastal Regulatory Zones.

(c) What are the Remote sensing techniques applied for monitoring the fishing activities in the coastal zones ?

(d) Explain how CRZ-I is violated in the coasts of West Bengal and Odisha.

GROUP — C

3. Answer any *two* questions : 2 × 2

(*a*) What is the role of coastal bioshield ?

(*b*) Justify the washover sand fan deposits as a consequence of sea level rise in the dune coast.

(*c*) Why the resource use conflicts occur in the coastal belt among the stalreholders ?

(*d*) Identify the consequences of coastal urbanization.

Option — II

[Special Paper : *Urban Geography and Regional Planning*]

UNIT — XLIII

(*Theoretical Bases of Regional Planning*)

GROUP — A

1. Answer any *one* questions : 8 × 1

(*a*) Explain the regional growth perspective in the light of F. Perrouxian theory of "Growth Pole".

(*b*) Bring out rational of underdevelopment as explained in Dependency Theories.

GROUP – B

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

(*a*) Discuss briefly the magnitude of deprivation and related conflicts in Western part of Paschim Medinipur.

(*b*) 'Regional imbalance is a policy problem"– Elucidate the statement highlighting G. Myrdal's concept.

(*c*) Critically discuss the advantages and disadvantages of Agropolitan development.

(*d*) Highlight the environmental problems experience by coastal regions of Purba Medinipur.

GROUP – C

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

(*a*) What do you mean by "Economic Space" ?

(b) What is the out come of 'trickle down effect' ?

(c) Highlight the salient features of E. A. Johnson's "market towns as rural growth centres."

(d) Specify the reasons of social conflict in Paschim Medinipur.

UNIT — XLIV

(*Planning for Regional Development*)

GROUP — A

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

(a) Assess the role of agriculture in regional development.

(b) How does developed economy differ from underdeveloped economy ?

GROUP – B

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

4 × 2

(a) Evaluate the role of transport in industrial development.

(b) What are the salient features of DPAP ?

(c) Bringout the reasons behind the policy adopted for genesis of satellite and ring towns in India.

(d) Give an outline of the major strategies of JNNURM in India.

GROUP – C

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

(a) Enumerate the objectives of Golden quadrilateral project.

(b) What are the salient features of Industrial policy of India adopted in 1991 ?

(c) How would you connote multi-level planning?

(d) What do you mean by TOP-DOWN approach?

Option – III

[Special Paper : *Remote Sensing & GIS*]

UNIT – XLIII

(Advance RS)

GROUP – A

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

(a) How hyperspectral remote sensing in different from multispectral remotesensing and what are the major applications of hyperspectral remote sensing?

(b) Write a short note on different methods of radimetric corrections.

GROUP — B

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

  (a) How digital image processing are different from visual image processing.

  (b) What are the different metods to reduce the geometric error in case of a digital image ?

  (c) Explain the mechanism of the synthetic aperture Radar (SAR).

  (d) Discuss about the utility of different thermal sensors.

GROUP — C

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

  (a) What do you mean by spectral pattern ?

  (b) Write a short note on Lidar.

  (c) What is convolution ?

  (d) How to generate thematic maps from satellite image ?

     (*Continued*)

UNIT – XLIV

(Application of RS & GIS)

GROUP – A

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

(a) Do you think that comparative assessment of SOI toposheet, serial photographs and satellite imageries in representing the geographical data is possible on same scale. Explain.

(b) (i) Describe in brief GIS functionalities- overlay, neighborhood and connectivity functions with suitable examples.

(ii) What are spatial and non-spatial attribute data ? There are various reasons why one would want to use DBMS to support data storage and processing. What are those ?

GROUP – B

2. Answer any two questions : 4 × 2

(a) Write a brief note on different segments of GPS.

(b) How remote sensing data can be used for preparation of geomorphic maps ?

(c) What are the different remote sensing data used for agricultural development—Explain.

(d) Discuss briefly on spatial, spectral, radiometric and temporal resolution with examples.

GROUP — C

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

(a) Write down the advantages of automatic digitization.

(b) Explain NDVI function and its applications.

(c) What is real time GIS ?

(d) Write a short note on GCPs.

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