

2017

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.

Illustrate the answers wherever necessary.

Unit-43

(Coastal Ecology and Hazards)

Group—A

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

- (a) Discuss how does biotidal accretion work in a mecrotidal deltaic environment.

(Turn Over)

- (b) Assess coast as a process-response system citing examples from an open coast you recently visited.

Group—B

2. Answer any *two* from the following questions : 2×4
- (a) Explain with illustration, Bruun's model of coastal erosion.
- (b) Assess utility of mangrove.
- (c) Describe physiological adaptive strategies of dune building plants.
- (d) Explain the principal factors regulating long-term changes in sea level.

Group—C

3. Answer any *two* from the following questions : 2×2
- (a) Why is PSMSL important in sea level research?
- (b) Define Mangal dwarf.
- (c) Distinguish between depressions, cyclonic storms and sever cyclonic storms as per India Meterological Department criteria.
- (d) Why do rabbits prefer to live near basinal stack in dune?

Unit-44**(Coastal Issues and Management)****Group—A**

1. Answer any *one* from the following question : 1×8
- (a) "Assessing coastal vulnerability and ecosystem valuation could be the ideal pathways for managing coastal change."—Explain. 8
- (b) Explain the application of Remote sensing and GIS techniques to identify coastal cell circulation systems and to prepare Geomorphological maps for managing coastal zones.

Group—B

2. Answer any *two* questions : 2×4
- (a) Identify the impacts of coastal engineering developments supported by hard structure designs. 4
- (b) Explain briefly the success of ICZM in coastal resource management. 4
- (c) Why sea level rise is a *major threat* to the coastal urbanization process? 4

- (d) Account for the importance of CRZ I from the point of view of biodiversity. 4

Group—C

3. Answer any *two* questions from the following : 2×2
- (a) Explain the basic concept of ecotourism. 2
- (b) Identify the risks associated with commercial fish farming on the coastal paddy lands. 2
- (c) What is coral bleaching? 2
- (d) Evaluate the negative impacts of dredging. 2

Special Paper

Unit-43

(Theoretical Bases of Regional Planning)

Group—A

1. Answer any *one* from the following questions : 1×8
- (a) What is basic need approach and why it is important in development of developing countries? 8

- (b) Critically explain the relevance of Perrescse's Growth Pole theory in the present day context.

Group—B

2. Answer any *two* from the following questions : 2×4
- (a) Explain the environmental impact of deforest as experienced in Jungle Mahal area in post-independ India.
- (b) Explain the basic idea of dependency theory as postulated by Friedman.
- (c) Highlight the problems and consequence of coastal erosion along the Digha coast of West Bengal.
- (d) Explain the processes of cumulative causation and backwash in economic development.

Group—C

3. Answer any *two* from the following questions : 2×2
- (a) What is Adhoc Region and why it is necessary in development actions ? 2
- (b) Differentiate regional disparity from regional diversity. 2
- (c) What are the principal reasons of soil salinization in Purba and Paschim Medinipur ? 2

- (d) State the approaches of convergence & divergence theories on regional development ? 2

Unit-44

(Planning for Regional Development)

Group—A

1. Answer any *one* from the following question : 1×8
- (a) How does the regional development policy set of developing countries differs from that of developed countries? Highlight major strategies of regional development leading to reduction of regional disparities in India.
- (b) Explain the significance of industrial development in promoting regional economic development and state the strategies of industrial development for resource poor regions of India.

Group—B

2. Answer any *two* questions : 2×4
- (a) How can agriculture promote rural economy of India ?

- (b) What do you understand by resource potential of a region and how it is assessed ?
- (c) Elaborate the role of transportation in developing linkage between agriculture and industry.
- (d) State the programme components of agricultural development in any regional plan.

Group—C

3. Answer any *two* questions from the following : 2×2
- (a) Establish PMGSY as a major step for development of rural connectivity.
 - (b) State the salient features of IAY/PMGAY in providing safe shelter to rural poor.
 - (c) Why RS and GIS are considered as essential tools for natural resource assessment ?
 - (d) What do you mean by 'balanced regional development'?
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Special Paper

Unit-43

(RS & GIS Special Paper)

Group—A

1. Answer any *one* from the following questions : 1×8
- (a) Write a short note on comparative advantages and disadvantages of multi special remote sensing and hyperspectral remote sensing.
 - (b) How visual image processing and digital image processing in combined give better opportunity to interpret the earth surface?

Group—B

2. Answer any *two* from the following questions : 2×4
- (a) Briefly explain the principles of thermal remote sensing.
 - (b) Briefly discuss the characteristics of synthetic Aperture Radar.
 - (c) Explain different methods of image filtering.
 - (d) How is the range resolution and azimuth resolution determined in microwave remote sensing?

Group—C

3. Answer any *two* from the following questions : 2×2
- (a) Which region of EMR is used for estimating surface elevation through LIDAR sensor? 2
- (b) What is palanization? 2
- (c) What do you mean by 'deskening'? 2
- (d) Which satellite dataset would you prefer for identifying rock types of a region and why? 2

Unit-44**(RS & GIS Special Paper)****Group—A**

Answer any *one* from the following question : 1×8

1. Describe any four spatial inter polation methods in detail.
2. How Remote Sensing and GIS technique can seamlessly integrated in land use planning.

Group—B

Answer any *two* questions : 2×4

3. Write a short note on the components of Web GIS.
4. Explain the essentiality of spatial Data Infrastructure (SDI) for planning and research purpose.
5. Explain the difference between the two kinds of spatial data models.
6. Describe the working principle of GPS.

Group—C

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

7. What are the attributes of a spatial data ?
 8. What is Realtime GIS ?
 9. What is Kappa Coefficient ?
 10. How is DGPS different from GPS ?
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