

QP Code: 23/PT/15/IA

POST-GRADUATE COURSE

Term End Examination — June, 2023/December, 2023

GEOGRAPHY

Paper-IA : GEOTECTONICS & GEOMORPHOLOGY

Time : 2 hours]

[Full Marks : 50

Weightage of Marks : 80%

Special credit will be given for precise and correct answer. Marks will be deducted for spelling mistakes, untidiness and illegible handwriting. The figures in the margin indicate full marks.

Answer any *three* questions from Section-A selecting at least *one* from each unit. Question No. 7 in Section-B is compulsory.

Section - A

10 × 3 = 30

[Unit-I : Geotectonics]

1. Explain the features of extrusive and intrusive processes and their associated landforms produced by vulcanicity. 5 + 5
2. Discuss the progress of ideas about the origin of the universe using Monistic hypotheses and Dualistic hypotheses. 5 + 5
3. Describe the role of Plate Tectonics theory in explaining the mountain building process in the earth. 10

[Unit-II : Geomorphology]

4. Critically explain the concept of Dynamic Equilibrium theory in explaining the landform development in Geomorphology. 10
5. Illustrate the concepts of the profile of equilibrium and the base level of erosion in landform development in Geomorphology. 5 + 5
6. What is meant by slope segment and slope element ? Discuss the slope replacement theory of W. Penck in evolution of slope forms. 3 + 7

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Section - B

7. Answer any *five* questions : 4 × 5 = 20
- a) Write a brief account of the isostatic anomaly.
 - b) Briefly discuss the view of Pratt on Isostasy.
 - c) What types of origin have been assigned to the submarine canyons ?
 - d) Write short notes on Subduction zone and Benioff zone.
 - e) State the concept of 'Grade'.
 - f) Justify the needs for applied geomorphology.
 - g) Write an account of the King's theory of slope evolution.
 - h) Briefly discuss the tidal hypothesis of Jeans and Jeffrey.
 - i) "Landscape is the function of structure, process and stage."
Explain the statement.
 - j) What are the significant differences between Davis and Penck's concept on landform development ?
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