

QP Code: 22/PT/15/IA

**POST-GRADUATE COURSE**

**Term End Examination — June, 2022/December, 2022**

**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.**

**Use of scientific calculator is strictly prohibited.**

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. Describe the Nebula Hypothesis of Laplace. What are the major aspects of Applied Geomorphology ? 7 + 3
2. Explain the concept of Plate Tectonic theory. How does the Plate Tectonic theory explain the process of mountain building ? 10
3. Elucidate the view of Airy and Pratt on Isostasy with diagrams. 10

**[ Unit-II : Geomorphology ]**

4. Critically explain the theory of Landform evolution as put forward by W. Penck. 10
5. Define the term 'Vulcanism' and explain the principal types of landforms produced by vulcanicity with illustrations. 2 + 8

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6. What is slope element ? Discuss the process of slope evolution in arid environment as identified by L. C. King. 2 + 8

**Section - B**

7. Answer any *five* questions : 4 × 5 = 20
- a) 'Landform evolution is the function of structure, process and stage.' — Explain it.
  - b) Write a short note on Subduction zone and Benioff zone.
  - c) Write a short note on Concept of Grade and Profile of Equilibrium.
  - d) Write a short note on Isostatic anomaly.
  - e) Write a short note on Parallel retreat of slope and slope replacement.
  - f) Distinguish between Peniplain and Pediplain.
  - g) Write a short note on Destructive plate movement.
  - h) What is a Geosyncline ?
  - i) Differentiate between Hot spot and Mid Oceanic Ridge.
  - j) Make a difference between Batholith and Laccolith.
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