

MA GEOGRAPHY
First Semester
FUNDAMENTALS OF GEOMORPHOLOGY
(MGE - 101)

Duration: 3Hrs.

Full Marks: 70

Part-A (Objective) =20
Part-B (Descriptive) =50

(PART-B: Descriptive)

Duration: 2 hrs. 40 mins.

Marks: 50

Answer any *four* from *Question no. 2 to 8*
Question no. 1 is compulsory.

1. Discuss the definition and scope of Geomorphology. (5+5=10)
2. What do you mean by equilibrium? Describe the different types of equilibrium. (3+7=10)
3. Explain the theory of plate tectonics. What are the different types of plate boundaries? Where does the energy for plate motion come from? (5+3+2=10)
4. Describe volcanic materials with examples. Give an account of different types of volcanoes based on type of eruption. (5+5=10)
5. What is weathering? Describe the processes involved in physical weathering. How does living organisms affect weathering? (3+4+3=10)
6. "Assam is a museum of rivers" – Describe it in fluvial context with suitable examples. (10)
7. Write short notes on (*any two*): (5×2=10)
 - a. Seismic waves.
 - b. Mass wasting.

- c. Applications of Geomorphology in engineering projects.
 - d. Applications of Geomorphology in North East India with example.
8. Describe the geology and tectonics of North-East Indian region. (10)

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Duration: 20 minutes

Marks – 20

(PART A - Objective Type)

I. Choose the correct answer:

1×10=10

1. “*Present is the key to the past*” – is associated with:
 - a. Catastrophism
 - b. Uniformitarianism
 - c. Neocatastrophism
 - d. Tectonics

2. The concept of Uniformitarianism was postulated by:
 - a. James Hutton
 - b. Mackinder/ Gilbert
 - c. Grifit Taylor
 - d. L.C. King/ Playfair

3. Major portion of India is in seismic zone:
 - a. II
 - b. III
 - c. IV
 - d. V

4. Diastrophic forces are:
 - a. Forces generated due to deepening of valley.
 - b. Forces generated due to widening of valley.
 - c. Exogenetic forces.
 - d. Endogenetic forces.

5. Which seismic waves are also called surface waves?
 - a. P waves
 - b. S waves
 - c. Pg-Sg waves
 - d. L waves

6. Karst topography is found mainly in regions characterized by:
 - a. Alluvial fans
 - b. Glacial outwash plains
 - c. Limestone bedrock
 - d. Loess

7. Permafrost refers to areas:
 - a. of permanently frozen ground.
 - b. where glaciers are present.
 - c. where the night time temperatures dip below 0⁰C.
 - d. with snow capped mountains.

8. Which one of the following is the correct sequence of landscape features from the source to the mouth of a river?
 - a. Alluvial fan, flood plain, waterfall.
 - b. Waterfall, flood plain, alluvial fan.
 - c. Waterfall, alluvial fan, flood plain.
 - d. Flood plain, waterfall, alluvial fan.

9. A narrow block elevated between two normal faults is a:
 - a. Graben
 - b. Horst
 - c. Plateau
 - d. Rift valley

10. Eastern Himalayas is composed of :
 - a. Palaeozoic, Mesozoic and Tertiary rocks.
 - b. Mesozoic, Tertiary and Quaternary rocks.
 - c. Palaeozoic, Mesozoic and Quaternary rocks.
 - d. Triassic, Jurassic and Cenozoic rocks.

II. Fill in the blanks:

1×6=6

1. The downslope movement of material due to gravity is called.....
2. A plain formed by wind action is called.....
3. The Moho discontinuity is the surface of demarcation between mantle and.....
4.are located in low lying areas in the desert.
5. Carbonation and hydrolysis are examples ofweathering.
6. Theocean is spreading due to plate tectonic motion.

III. Write true or false:

1×4=4

1. Warm temperature and high soil moisture content accelerates chemical weathering.
2. Barchan is a moon shaped sand dune.
3. Mid-oceanic ridges are formed due to deposition of oceanic sediments through ocean currents.
4. The Surma Valley is relatively simple in structure and seems to have been covered by a layer of alluvium.
