

MA DISASTER MANAGEMENT
Third Semester
Geomorphological Hazards and their Management
(MDM-12)

Duration: 3Hrs.

Full Marks: 70

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

(PART-B: Descriptive)

Duration: 2 hrs. 40 mins.

Marks: 50

1. Answer *any five* from the following:

2×5=10

- a) What is Water Erosion? Give one example.
- b) What is Landslide? Name two regions which are vulnerable to Landslide.
- c) What are the Mechanism of Landslide?
- d) In what way India is divided into seismic zones?
- e) How North-East India is under seismic risk?
- f) What is Tsunami?
- g) What is River Instability?

2. Write short notes on *any five* from the following:

3×5=15

- a) Aeolian Erosion
- b) Problems of Soil Erosion.
- c) 'Earthquakes can be induced by dams'. How?
- d) Is earthquake prediction is possible? If yes how or if no why?
- e) Phailin in India.
- f) Define fluvial process.
- g) Write two differences between wave and tide.

3. Answer *any five* from the following:

5×5=25

- a) Explain the factors and causes of Soil Erosion? Suggest some measures to manage soil erosion.
- b) Discuss the factors responsible for Landslide and methods for Landslide investigation.
- c) What are the precautionary measures which should be taken in case of an earthquake in North-East India?
- d) How Geomorphological characteristics of an area are important for Environmental Impact Assessment (EIA)?

- e) Prepare a note on impact of flood in Assam and its management.
- f) Put forward your views on how to control coastal erosion.
- g) Discuss about the causes of river bank erosion. Give diagram in support.

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(The figures in the margin indicate full marks for the questions)

Duration: 20 minutes

Marks – 20

PART A- Objective Type

Choose the correct answer from the following options:

1×20=20

1. Soil Erosion is-

- a) Man made problem b) Natural problem
c) The result of flooded rivers d) None of these

2. Wind deflation in arid region leads to excavation of wide shallow basin is known as-

- a) Deflation hollows b) Oases c) Deflation basin d) Ravine erosion.

3. Which of the following type of soil erosion is most destructive-?

- a) Rill and ravine erosion b) Wind erosion c) Sheet erosion d) Gully erosion

4. In which of the following geographical region, highest soil erosion is occurred?

- a) Himalaya b) Peninsular India c) River plains d) Thar desert

5. Which of the following method is used to identify Landslide prone area since 1980

- a) Landslide zonation mapping b) Landslide Identification technique
c) Soil and Landslide zonation mapping d) All the above

6. Which part of India falls under earthquake zone IV?

- a) Western Ghats b) Vindhyan region c) Kashmir Himalaya d) North-Eastern region

7. The Earth's internal heat is responsible for causing _____.

- a) Hurricanes b) Floods c) Earthquakes d) Forest fire

8. The zone of the earth that is divided into rigid plates is the

- a) Atmosphere b) Lithosphere c) Biosphere d) Hydrosphere

9. The type of energy that shakes the Earth during an earthquake is produced by _____.

- a) Gravitational attraction b) Density variations c) Shock waves d) Solar energy

10. The rate of a mass movement will tend to _____ with an increase in water content.
a) Decrease b) Remain the same c) Increase d) Show no relationship
11. Dams are designed to reduce flooding by _____.
a) Protecting river banks from erosion
b) Providing storage for flood water
c) Increasing the downstream velocity of flood water
d) Trapping sediment behind the dam so it can't be deposited downstream
12. When do spring tides take place?
a) On new moon day b) On full moon day
c) On both new and full moon day d) None of these
13. Tsunamis are triggered by-
a) Tides b) Cyclones c) Sub-marine earthquakes d) Shrinking of the earth's crust
14. Which one of the following characteristics separates GIS from the other systems-?
a) Map making and generalised output b) Linking spatial and non-spatial data
c) Map designing and layout d) All of these
15. The earth's shape most closely resembles-
a) A basketball b) A pear c) A ping-pong ball d) An apple
16. 'Eco mark' is given to the Indian products that are-
a) Pure and unadulterated b) Rich in proteins
c) Environment friendly d) Economically viable
17. Climate is the average weather condition for-
a) 60 years b) 30 years c) 100 years d) 10 years
18. Best use of resource without abuse is called –
a) Conservation b) Storage c) Deposition d) Optimum use
19. The channelled movement of water along a valley bottom is called-
a) Overland flow b) Stream flow c) Fluvial process d) All of them
20. The higher land above the valley walls that separates adjacent valleys is called-
a) Interfluves b) Valley c) Drainage divide d) None of them
