

M.Sc. ENVIRONMENTAL SCIENCE
THIRD SEMESTER
ENVIRONMENTAL GEOSCIENCES AND METEOROLOGY
MEV – 301

**SET
A**

[USE OMR FOR OBJECTIVE PART]

Duration: 3 hrs.

Full Marks: 70

Time: 30 min.

(Objective)

Marks: 20

1X20=20

Choose the correct answer from the following:

1. The Himalayan Mountain range was formed because of collision between
a. Indian plate and Eurasian plate b. Indian plate and Chinese plate
c. Indian plate and Russian plate d. None of above
2. Who among the following coined the phrase 'Jet Stream'?
a. Wiley Post b. H. Seilkopf
c. Herodotus d. Sir Gilbert Walker
3. The 'long rains' is also called as,
a. Southwest monsoon b. Western monsoon
c. northeast monsoon d. Eastern Monsoon
4. Af represents the,
a. Tropical wet Climate b. Tropical wet and dry
c. Subtropical steppe d. Tropical monsoon
5. Koeppen's system of classification of climates can be termed as,
a. Genetic b. Applied
c. Empirical d. Action
6. Full form of IMD
a. Indian Meteorological Department b. Indian Marine Department
c. India Meteorological Department d. Indian Multi developmental Department
7. How many major tectonic plates are there on Earth surface?
a. 3 b. 4
c. 7 d. 10
8. Glacier is a ---- sheet of ice
a. Fast moving b. Slow moving
c. Static d. None of above
9. Alfred Wegener proposed
a. Continental drift hypothesis b. Plate tectonic theory
c. Both d. None of above
10. Which tectonic boundary is associated with formation of deep ocean trenches?
a. Convergent boundary b. Divergent boundary
c. Subduction boundary d. Transform boundary

11. The movement of tectonic plate is primarily driven by
 - a. Gravitational force
 - b. Wind pattern
 - c. Mantle convection
 - d. Ocean currents
12. Humid subtropical find in what type of climate?
 - a. A-type
 - b. B-type
 - c. C-type
 - d. D-type
13. The relative movement of the plates ranges from _____ annually.
 - a. 0 to 0.1 mm
 - b. 0 to 1 mm
 - c. 0 to 10 mm
 - d. 0 to 100 mm
14. Hooke's law states that _____
 - a. stress is always proportional to strain
 - b. stress is proportional to strain before ultimate tensile strength
 - c. stress is proportional to strain under elastic limit
 - d. stress and strain are never directly proportional
15. Rolling and saltation are associated with
 - a. Erosion of sediments
 - b. Weathering of sediments
 - c. Deposition of sediments
 - d. All of above
16. Which of the following is used to measure the intensity of an earthquake?
 - a. Richter scale
 - b. Mercalli scale
 - c. Reid scale
 - d. None of above
17. Sandstone is an example of
 - a. Igneous rock
 - b. Sedimentary rock
 - c. Metamorphic rock
 - d. Non-foliated rock
18. Which process is necessary for formation of igneous rocks?
 - a. Erosion
 - b. Sedimentation
 - c. Solidification
 - d. Weathering
19. Strain is defined as the ratio of
 - a. Change in volume to original volume
 - b. Change in length to original length
 - c. Change in cross-sectional area to original cross-sectional area
 - d. Any one of above
20. Tsunamis are caused because of which of these phenomena?
 - a. Development of a low pressure zone near the sea surface
 - b. Volcanic activities under the sea
 - c. Seismic activities under the sea bed
 - d. Gravitational pull of the moon and the earth

(Descriptive)

Time : 2 hrs. 40 min.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

1. What are different types of glaciers? Discuss physical and chemical aspects of glaciers. 4+6=10
2. Write the evidences in support of continental drift hypothesis. 4+6=10
3. Make a comparison of the climatic conditions between the "A" and "B" types of climates. How is the genetic system of classification different from the "empirical" system of classification of climate? 6+4=10
4. How does cloud formation take place? Mention different types of precipitation. 6+4 = 10
5. What is Atmospheric pressure? Write the causes of atmospheric pressure. Explain the relationship between air pressure and temperature. 2+4+2 = 10
6. What are Geological hazards? Write about causes and measuring methods of earthquake. 2+6=10
7. What are the different types of rocks? Give examples. Write about their formation. 3+7=10
8. Write short notes on (any two)
 - a. Sun & Earth Relationship
 - b. Indian Monsoon
 - c. Glaciers as an index of climate change5+5 = 10

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