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**1 SEM TDC GEO M 1**

**2019**

( November )

**GEOLOGY**

( Major )

Course : 101

( **General Geology** )

Full Marks : 80

Pass Marks : 32/24

Time : 3 hours

*The figures in the margin indicate full marks  
for the questions*

UNIT—1.1

( **Introduction to Geology** )

( Marks : 15 )

1. Fill in the blanks : 1+1=2

(a) The geological period comprising from Paleocene to Oligocene is called \_\_\_\_\_.

(b) When a younger fossil is found in an older formation then it is termed as \_\_\_\_\_ fossil.

( 2 )

2. Mention the different branches of geology. Write about the interrelationships of geology with other branches of science. 2+3=5

Or

Define magma and lava. What are the major types of magma and lava? Write briefly on their characteristics. 1+2+2=5

3. Write on different modes of preservation of fossils. Write on the application of fossil in geology. 5+3=8

UNIT—1.2

( Physical Geology )

( Marks : 25 )

4. Fill in the blanks : 1×3=3

(a) Potassium-40 is a radioactive isotope of potassium, it decays to \_\_\_\_-40 and \_\_\_\_-40.

(b) Volcanic eruption marked by columns of volcanic debris and hot gases ejected high into the stratosphere is called \_\_\_\_ type of eruption.

(c) Seafloor spreading hypothesis was proposed by \_\_\_\_ in 1960.

( 3 )

5. Describe with sketches the different layers and constituent materials of the interior of the earth. 9
6. Write a short note on any one of the following : 4
- (a) Orogeny and epeirogeny
- (b) Eugeosyncline
7. Write on the causes of earthquake. Mention the scales for measuring intensity, magnitude and seismic moments of the earthquakes. 6+3=9

Or

Write on the theory of continental drift and its support on the theory of plate tectonics. 9

UNIT—1.3

( Geomorphology )

( Marks : 25 )

8. Fill in the blanks : 1×3=3
- (a) In an ideal soil profile, the illuvial horizon is represented by the \_\_\_\_\_ horizon of the soil profile.

- (b) A series of coalescing alluvial fans along a mountain front in desert is called \_\_\_\_.
- (c) Chemical weathering (breakdown) of a rock or substance when combined with water is called \_\_\_\_.
9. How do mass wasting differ from weathering? Describe the important types of mass wasting along with their causes. 9
10. Describe the geomorphic features developed either in glacial environment or in coastal environment. 9
11. Write a short note on any *one* of the following : 4
- (a) Trellis drainage pattern
- (b) Geomorphology of the Brahmaputra valley

UNIT—1.4

**( Principles of Geochemistry )**

( Marks : 15 )

12. Fill in the blanks : 1
- In the solar system, there are three main types of meteorites, which are called \_\_\_\_, \_\_\_\_, and rocky meteorites.

( 5 )

13. Write a short note on any *one* of the following : 4

(a) Composition of the crust

(b) Geochemical association of elements

14. Write on geochemical classification according to their preferred host phases. 10

*Or*

Describe the Goldschmidt's rule of camouflage, capture and admittance of elements.

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