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Time : 3 Hours**GEOLOGY****Subject Code**

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Total No. of Questions : 35**(Printed Pages : 7)****Maximum Marks : 70**

- INSTRUCTIONS :**
- (i) All questions are compulsory.
 - (ii) Draw a neat labelled diagram wherever necessary.
 - (iii) Figures to the right indicate full marks.
 - (iv) The question paper consists of four sections. A, B, C, and D.
 - (a) Section A has 14 questions of 1 mark each.
 - (b) Section B has 10 questions of 2 marks each.
 - (c) Section C has 8 questions of 3 marks each.
 - (d) Section D has 3 questions of 4 marks each.
 - (v) The total number of questions in the paper is 35.
 - (vi) There is no overall choice, however an internal choice is provided in one question of Section C and two questions of Section D.
 - (vii) Select the proper alternative for the multiple choice type questions and write the completed statement. Multiple choice type questions should be attempted only once.
 - (viii) Answers to the questions carrying 1, 2, 3 and 4 marks should be written in 1 to 10, 50, 80 and 120 words.

Section A

1. An ore mineral of Zinc is 1
 - Galena
 - Sphalerite
 - Pitchblende
 - Bauxite

2. Choose the *correct* pair from the following 1
 - Granite—undersaturated
 - Gabbro—saturated
 - Dunite—saturated
 - Syenite—Oversaturated

3. Iron ore deposits of Goa are of 1
 - Epigenetic origin
 - Hypogene origin
 - Supergene origin
 - Syngenetic origin

4. The fold with axial plane essentially horizontal with limbs dipping at equal angles is 1

- Symmetrical isoclinal fold
- Chevron fold
- Overturned fold
- Recumbent isoclinal fold

5. Mountains formed due to Horst are called as 1

- Residual mountains
- Block mountains
- Dome mountains
- Fold mountains

6. The rock consisting of essential minerals as Plagioclase feldspar and Pyroxene is 1

- Syenite
- Dunite
- Granite
- Gabbro

7. A mineral to crystallise at last in the Bowen's reaction series is 1
- Muscovite
 - Biotite
 - Quartz
 - Albite
8. Name the ore mineral of Uranium. 1
9. Define 'Plunge' of a fold. 1
10. Name the intergrowth texture associated with Quartz and alkali Feldspar. 1
11. Give chemical composition of Chalcocite. 1
12. Define the term Hypocentre. 1
13. Name the type of mountains associated with 'Laccolith'. 1
14. Which is the youngest group of Dharwar Supergroup of Rocks ? 1

Section B

15. State the metamorphic products of the following : 2
- (i) Sandstone
 - (ii) Slate

16. Give *two* points of difference between Shell Limestone and Conglomerate. 2
17. In Himalayas, rocks of Paleozoic age are found resting over rocks of Mesozoic age. Justify. 2
18. A Sandstone bed dip with 40° and 25° in different cross sections. Identify the true dip. Justify the selection. 2
19. Explain body waves and their properties. 2
20. With a neat labelled diagram, explain Late magmatic segregation deposits. 2
21. Seismic recording stations between 102° to 140° from epicentre do not record any seismic waves. Explain. 2
22. Explain Gneissosity in Metamorphic Rocks. 2
23. What are Isoseismal lines ? State their significance. 2
24. Some Igneous rocks exhibit porphyritic texture. Explain. 2

Section C

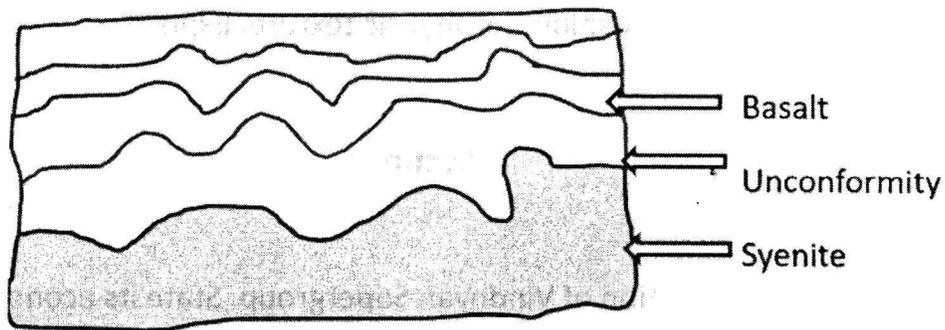
25. State the classification of Vindhyan Supergroup. State its economic significance. 3
26. Write a short note on distribution of coal deposit in India. 3

27. Explain with a neat diagram Throw and Heave of a fault. 3
28. Explain fissure type of volcanic eruption with examples. 3

Or

Explain various types of solid products of volcanic eruption.

29. Give brief account of various periods in Paleozoic era. 3
30. Explain copper belts in India. 3
31. Explain principles of : 3
- (i) Superposition
- (ii) Intrusion
32. Study the following diagram, identify the type of unconformity and explain its tectonic evolution. 3



Section D

33. Illustrate and explain various convergent plate boundaries with its characteristic features and examples. 4

34. Explain the significance of fossils in understanding the geological history of our planet. 4

Or

Describe the stratigraphy of 'Goa Group'.

35. With the neat diagram explain various Geometrical classification of joints. 4

Or

With the neat labelled diagram explain elements of faults.