2024 III 06 **0930** **Seat No.** | | | | | |

Time : 3 Hours **GEOLOGY**

Subject Code

H	4	7	0	6

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 lebelled 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

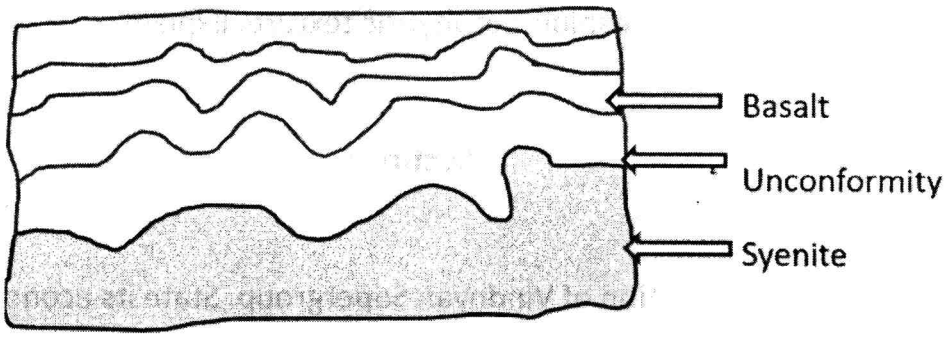
30. Explain copper belts in India. 3

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.