TDC (CBCS) Odd Semester Exam., 2021
held in March, 2022

GEOLOGY

(5th Semester)

Course No. : GELDSE–501T

(Exploration Geology)

Full Marks : 50
Pass Marks : 20

Time : 3 hours

The figures in the margin indicate full marks for the questions

SECTION—A

Answer any *fifteen* of the following questions : 1×15=15

1. Name two metals that have been used for long time in human history.
2. Define industrial minerals.
3. Name two ore-forming minerals of base metal.

4. Define resource.

5. What is reconnaissance survey?

6. When does a deposit become a 'prospect'?

7. What is a grab sample?

8. Define bulk sampling.

9. Define probability.

10. What is a histogram?

11. Define deviation.

12. What is arithmetic mean?

13. Name two common bits used in core drilling.

14. What is borehole deviation?

15. Mention the types of samples recovered from drilling.

16. What is the difference between dry and wet drilling?

17. What is method of analogy in reserve computation?

(Continued)

18. Mention the type of deposits in which polygon method of reserve estimation is used.

19. Define bulk density.

20. Define isolines.

SECTION—B

Answer any *five* of the following questions : 2×5=10

21. Write a short note on placer deposit.

22. Write a short note on skarn deposit.

23. Briefly describe the role of sampling in exploration.

24. Write on the geomorphological signatures of ore deposit occurrence.

25. Write a note on Churn drilling.

26. Write briefly on non-core drilling.

27. Write a note on variance.

28. How is the coefficient of variability calculated?

(Turn Over)

29. What is confidence interval and how is it calculated?

30. Write the importance of geostatistics.

SECTION—C

Answer any *five* of the following questions : 5×5=25

31. Describe the BIS classification of reserves.

32. Discuss the processes of formation of magmatic ore deposit. Give examples.

33. Describe the basic principles of geochemical prospecting.

34. Discuss various stages of exploration.

35. What is standard deviation? Show how it is calculated for evaluation of sampling data. 1+4=5

36. With the help of a histogram, define mean, mode and median. Write briefly on their significance. 3+2=5

37. Discuss the process of core-logging.

38. With proper diagram, write a detailed note on location of boreholes.

39. Describe the triangular method of reserve estimation.

40. Describe how the grade and tonnage of ore is calculated with examples.

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