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

GEOLOGY

(3rd Semester)

Course No. : GELDSC/GE-301T

(Petrology)

Full Marks : 50
Pass Marks : 20

Time : 3 hours

The figures in the margin indicate full marks for the questions

SECTION—A

Answer/Write on the following (any *fifteen*) : 1×15=15

1. What is lava?

2. Define parental magma.

3. What is fractional crystallization?

4. Define pluton.

5. What is hypabyssal igneous rock?

6. Define ultramafic rock.

7. What is normative mineral?

8. Name two essential minerals of granite.

9. Define weathering.

10. Distinguish between clastic and non-clastic sedimentary rock.

11. Write the basic difference between conglomerate and breccia.

12. Write the composition of sandstone.

13. Name two minerals that characterize low-grade metamorphism.

14. Cataclastic metamorphism

15. Mylonitic structure

16. Index mineral

17. What is a foliated rock?

18. Name the rock that shows mineralogical bonding.

19. Name a low-grade metamorphic rock.

20. What is dominant mineral in muscovite-biotite schist?

SECTION—B

Write short notes on any *five* of the following : 2×5=10

21. Reaction principle

22. Origin of magma by decomposition melting

23. Classification of igneous rocks based on silica saturation

24. Diorite

25. Types of breccia

26. Shale

27. Grades of metamorphism

28. Phyllitic structure

29. Textures of quartzite

30. Petrography

SECTION—C

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

31. Describe with neat sketches the various types of forms of intrusive igneous rocks.

32. What is differentiation? Write a note on primary and secondary differentiation. Describe briefly the process of assimilation. 1+1+3=5

33. Describe the salient features of IUGS classification of felsic igneous rocks.

34. Give a detailed petrographic description of rhyolite and syenite. 2½+2½=5

35. Describe the primary sedimentary structures of mechanical origin.

36. Give a detailed petrographic description of limestone.

37. Describe various types of regional metamorphism.

38. Describe various types of metamorphic structures.

39. Describe the petrographic varieties of schists.

40. Give a detailed petrographic description of slate and marble. 2½+2½=5

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