



**2022/TDC(CBCS)/EVEN/SEM/
GELDSC/GEC-201T/245**

TDC (CBCS) Even Semester Exam., 2022

GEOLOGY

(2nd Semester)

Course No. : GELDSC/GEC-201T

(Crystallography and Mineralogy)

Full Marks : 50

Pass Marks : 20

Time : 3 hours

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

SECTION—A

Write briefly on any fifteen :

1×15=15

1. Face
2. Edge
3. One example of crystal
4. Solid angle
5. Cube



(2)

6. Octahedron
7. Crystal system
8. Angular relationship of axes in orthorhombic system
9. Fractures in quartz
10. Hardness of diamond
11. Cleavages in calcite
12. Streak
13. Polarizer
14. Analyzer
15. Extinction
16. Pleochroism
17. Colour of quartz in PP light
18. Chemical composition of olivine
19. Extinction positions of hornblende
20. Twinning of feldspar

SECTION—B

Write notes on any *five* :

2×5=10

21. Types of crystal
22. Contact goniometer



(3)

23. Triclinic system
24. Monoclinic system
25. Mineral
26. Types of cleavage
27. Ordinary light
28. Polarized light
29. Biotite
30. Muscovite

SECTION—C

Answer any *five* questions : 5×5=25

31. Describe the various forms present in crystal.
32. Write a note on Weiss parameter.
33. Describe the symmetry elements of normal class of isometric system.
34. Describe the symmetry elements of normal class of tetragonal system.
35. Describe the physical properties of minerals.
36. Write the physical properties of olivine and hornblende.



(4)

37. Write briefly on the common optical properties of light observed under petrological microscopes.
38. Describe briefly on polarizing microscope along with its functioning.
39. Describe the optical properties of microcline observed under both PPL and XPL.
40. Write in tabular form the common optical properties of augite and garnet.
