

20P251

(Pages: 1)

Name.....

Reg. No.....

SECOND SEMESTER M.Sc. DEGREE EXAMINATION, APRIL 2021

(CUCSS - PG)

CC19P GEL2 C05 - CRYSTALLOGRAPHY & MINERALOGY

(Applied Geology)

(2019 Admission - Regular)

Time: Three Hours

Maximum: 30 Weightage

I. Short answer type questions. Answer any *four* questions. Each question carries 2 weightage.

1. Interference colours and determination of order.
2. Symmetry operations
3. Chemical bonds.
4. Isomorphism.
5. Mineral transformations in the mantle with depth.
6. Determination of zone symbols.
7. Repetition theory.

(4 × 2 = 8 Weightage)

II. Short essay questions. Answer any *four* questions. Each question carries 3 weightage.

8. Translation periodicity of crystals.
9. Determination of optic sign and sign of elongation.
10. Framework silicates.
11. Principles of X-ray crystallography.
12. Optical indicatrices.
13. Napier's Rule.
14. Stereographic projection.

(4 × 3 = 12 Weightage)

III. Long essay. Answer any *two* questions. Each question carries 5 weightage.

15. Write an essay on crystal notations. Add a note on comparison between different types of crystal notations.
16. Explain the derivation of 32 crystal classes.
17. What are Nesosilicates? Describe main characteristics of various minerals of Olivine group.
18. Discuss Conoscopic studies of minerals.

(2 × 5 = 10 Weightage)
