

16U413

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Name:

Reg. No.....

FOURTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2019

(Regular/Improvement/Supplementary)

(CUCBCSS-UG)

CC15U GL4 B07 - MINERALOGY

Geology - Core Course

(2015 Admission onwards)

Time: Three Hours

Maximum: 80 Marks

I. Answer *all* the questions: Each question carries 1 mark.

1. A mineral with hemimorphic crystallization.
2. The high pressure polymorph of Al_2SiO_5
3. The system of crystallization of Garnet.
4. The mineral having chemical composition $\text{Ca}_5(\text{PO}_4)_3\text{F}$
5. Name a mineral which showing varying hardness.
6. A mineral showing the property of dichroism.
7. A mineral in thin section which shows cross hatched twinning.
8. The optic sign of biaxial mineral with Z as the acute bisectrix.
9. The mineral showing kidney shaped form.
10. Mineral like substance without definite chemical composition and internal atomic structure.

(10 x 1 = 10 Marks)

II. Define any *ten* questions in one or two sentences: Each question carries 2 marks.

11. Percussion figure.
12. Critical angle.
13. Refractive index.
14. Inosilicates.
15. Biaxial mineral.
16. Solid solution.
17. Cohesion.
18. Cleavage.
19. Optic sign.
20. Quartz wedge.
21. Moh's hardness scale.
22. Pleochroism.

(10 x 2 = 20 Marks)

III. Write short essay on any *five* questions: Each question carries 6 marks.

23. Interference colour and Michael Levy's chart.
24. Piezoelectricity and pyroelectricity.
25. Bonding in minerals.
26. Type of extinctions.
27. Isotropic and anisotropic minerals.
28. Aluminium silicate family.
29. Varieties and Polymorph's Quarts.
30. Double refraction and birefringence.

(5 x 6 = 30 Marks)

IV. Write essays on any *two* of the following: Each question carries 10 marks.

31. Write an essay on properties of thin section of a mineral under the petrological microscope.
32. Briefly describe the various physical characters of minerals.
33. Describe an essay on various properties of pyroxene group of minerals.
34. Describe olivine group of minerals with particular reference to their chemical composition, physical properties and mode of occurrence.

(2 x 10 = 20 Marks)
