

16U413

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Name:

Reg. No.

FOURTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2018

(Regular/Supplementary/Improvement)

(CUCBCSS-UG)

CC15U GL4 B07 – MINERALOGY

(Geology - Core Course)

(2015 Admission onwards)

Time: Three Hours

Maximum: 80 Marks

I. Answer *all* questions:

1. The resistance of a mineral to breaking, crushing, bending or tearing.
2. The characteristic property in which interior of a mineral may produce a series of colours as the angle of incident light change.
3. The group of alkali- alumino silicate minerals similar to feldspars but having lower alkali-silica ratio.
4. Chemical composition of Magnetite.
5. Name the chromium bearing Garnet.
6. Forsterite- Fayalite solid solution series belongs to which mineral group.
7. The general term for pyroxenes having high calcium content and crystallizes in monoclinic.
8. Name the lithium bearing mica.
9. The property of a mineral whose internal structure has been changed without change in composition or external form.
10. A parallel to sub parallel intergrowth of potassium and sodic feldspar, in which the potassium rich phase being the host.

(10 x 1 = 10 Marks)

II. Define any *ten* questions in one or two sentences each:

11. Cordierite.
12. Double refraction.
13. Zeolites.
14. Optic axis.
15. Specific gravity and density of minerals.
16. Covalent bonding in minerals.
17. Polaroid.

18. Beta quartz.
19. Quartz wedge.
20. Isotropic minerals.
21. Extinction angle.
22. Michel –Levy chart.

(10 x 2 = 20 Marks)

III. Write short essay on any *five* of the following questions:

23. Pseudomorphism and polymorphism in minerals.
24. Exsolution and solid solution in minerals.
25. Determination of Specific gravity.
26. Pleochroism.
27. Physical properties and bonding in graphite and diamond.
28. Compare the optical properties of quartz and plagioclase.
29. Optic sign determination of uniaxial minerals.
30. Amphibole group of minerals.

(5 x 6 = 30 Marks)

IV. Write essays on any *two* of the following:

31. Describe the feldspar group of minerals. Add a note on their occurrence and association.
32. Explain the parts of a Petrological microscope with neat sketches.
33. Give an account of the mineralogy, optical and physical properties, mode of occurrence of Epidote.
34. Discuss the structure and classification of Silicates with neat sketches and examples.

(2 x 10 = 20 Marks)
