

15U413

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Name:

Reg. No.

FOURTH SEMESTER B.Sc. DEGREE EXAMINATION, MAY 2017

(CUCBCSS-UG)

Geology - Core Course

CC15U GL4 B07 - MINERALOGY

(2015 Admission)

Time: Three Hours

Maximum: 80 Marks

I. Answer all the ten questions:

1. A mineral which cannot be scratched by corundum
2. A mineral which shows least alteration
3. mineral shows double hardness
4. Chemical formulae of sphene
5. Pyroxene which shows pink pleochroism
6. Minerals which are extinct throughout 360° rotation under crossed polars are called as
7. A mineral which shows symmetric extinction
8. Common alteration product of olivine
9. Mica which is white in colour
10. is known as 1λ (one lamda) plate

(10x1 Marks)

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

11. Mineral
12. Luster
13. Double refraction
14. Refractive index
15. Vander walls bonding
16. Piezoelectricity
17. Total internal reflection
18. Optic axis
19. Pseudomorphism
20. Indicatrix
21. Varieties of corundum
22. True colour of a mineral

(10x2=20 Marks)

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

23. Covalent and ionic bonds
24. Solid solution and exsolution
25. Hardness and cleavage
26. Polarized light
27. Garnet group
28. Uniaxial and biaxial minerals
29. Quartz group
30. Cordierite and calcite

(5x6=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. Describe the optical properties of minerals.
33. Describe the construction of nicol's prism. Add a note on how it is used for determining order of interference colour of mineral.
34. Describe the silicate structures with example.

(2x10=20 Marks)