



~~18/12/23~~
15/12/23

DOON UNIVERSITY, DEHRADUN
End Semester Examination of B.Sc- I Semester
Academic Year 2023-24
Dr. Nityanand Himalayan Research and Study Centre
Department of Geology
GEC-103–Mineralogy & Crystallography

Time Allowed 2.00 Hours

Maximum Marks: 50

(Make appropriate figures if needed)

SECTION: A

Write a short note on

Attempt any FIVE questions.

(2 X 5= 10)

1. What is Relief? Its types.
2. Describe dispersion of light with a diagram.
3. What is Hexagonal close packing?
4. What do you understand by Under Crossed Nicols?
5. What is Cubic close packing?
6. What is a universal stage?
7. Hardness scale

SECTION: B

Attempt FOUR questions.

(Marks: 5 X 4= 20)

1. Elaborate on Crystal symmetry.
2. Describe mineral classification of native elements and carbonates.
3. What is X Ray? Elaborate on its use in crystallography?
4. Elaborate on the petrological microscope and its different types of illuminations.
5. Describe symmetry operation and its types.

SECTION: C

Attempt TWO questions.

(Marks: 10 X 2= 20)

1. Write a detailed note on all the crystal systems with appropriate diagrams.
2. Elaborate on Olivine and Garnet group.
3. Describe the classes dependent on the refractive index of different minerals. Also, write about all the mineral properties under plane polarized light.