

BGYCT-133

ASSIGNMENT BOOKLET

Bachelor's Degree Programme (BSCG)

CRYSTALLOGRAPHY, MINERALOGY AND ECONOMIC GEOLOGY

Valid from 1st January, 2023 to 31st December 2023

It is compulsory to submit assignment prior to filling Examination form



**School of Sciences
Indira Gandhi National Open University
Maidan Garhi, New Delhi-110068**

(2023)

Dear Student,

Please read the section on assignments in the Programme Guide for B.Sc. that we sent you after your enrolment. A weightage of 30 percent, as you are aware, has been earmarked for continuous evaluation, **which would consist of one tutor-marked assignment** for this course. The assignment is in this booklet, and it consists of two parts, Part A and B. The total marks of all the parts are 100, of which 35% are needed to pass it.

Instructions for Formatting Your Assignments

Before attempting the assignment please read the following instructions carefully:

- 1) On top of the first page of your answer sheet, please write the details exactly in the following format:

ROLL NO.:

NAME:

ADDRESS:

.....

.....

COURSE CODE:

COURSE TITLE:

ASSIGNMENT NO.:

STUDY CENTRE: **DATE:**

PLEASE FOLLOW THE ABOVE FORMAT STRICTLY TO FACILITATE EVALUATION AND TO AVOID DELAY.

- 2) Use only foolscap size writing paper (but not of very thin variety) for writing your answers.
- 3) Leave 4 cm margin on the left, top and bottom of your answer sheet.
- 4) Your answers should be precise.
- 5) Solve Part A and Part B of this assignment, and **submit the complete assignment answer sheets containing Parts A and B by the due date.**
- 6) The assignment answer sheets are to be submitted to your Study Centre by the due date as per the schedule. **Answer sheets received after the due date shall not be accepted.**
- 7) **We strongly suggest that you retain a copy of your answer sheets for reference.**
- 8) This assignment is **valid from 1st January 2023 to 31th December 2023.** If you have failed in this assignment or fail to submit it by December 2023, then you need to get the assignment for the year **2024**, and submit it as per the instructions given in the Programme Guide.
- 9) **You cannot fill the examination form for this course until you have submitted this assignment.** For any queries, please contact: meenalmishra@ignou.ac.in, bdeshmukh@ignou.ac.in.

We wish you good luck.

Tutor Marked Assignment

CRYSTALLOGRAPHY, MINERALOGY AND ECONOMIC GEOLOGY

Course Code: BGYCT-133
Assignment Code: BGYCT-133/TMA/2023

Maximum Marks: 100

Note: Attempt all questions. The marks for each question are indicated against it. Write all answers in your own words; do not copy from the course material.

Part A

1. Write short notes on the following:
 - a) Parts of a crystal (5)
 - b) Development of mineral classification scheme (5)
2. Define symmetry and describe the three elements of symmetry with the help of suitable diagrams. (10)
3. Discuss the crystallographic axes, symmetry elements and forms of normal class of hexagonal crystal system with the help of neat well labeled diagrams. (10)
4. Describe the physical properties of minerals belonging to quartz and garnet groups of minerals giving suitable examples. (10)
5. Describe the physical properties of minerals based on stresses and forces. (10)

Part B

6. Explain the oxidation and supergene enrichment processes of ore formation giving suitable examples. (10)
7. Write short notes on the following:
 - a) Optical properties of calcite (5)
 - b) Isotropic and anisotropic minerals (5)
8. Discuss the optical properties of minerals studied under plain polarised light. (10)
9. Describe chief ores, processes of formation and geographical distribution of manganese ores in India with the help of a neat map. (10)
10. Explain the nature and morphology of ore bodies with the help of neat well labelled diagrams. (10)