



UNIVERSITY OF RUHUNA
FACULTY OF FISHERIES AND MARINE SCIENCES & TECHNOLOGY
Academic Year 2022/2023
Bachelor of Science Honours in Marine and Freshwater Sciences Degree
Level III Semester I Examination - April /May 2024
OCG 3112 - Mineralogy **Time: 1 ½ hours**

Part B

Answer only two (02) Questions

1.
 - a. What is exsolution? Give at least one example of a mineral that commonly shows exsolution. (04 marks)
 - b. What is a solid solution? Give examples of at least three minerals that show solid solution, giving the endmembers for each mineral. (16 marks)
 - c. Explain why a grain of an isotropic substance will remain extinct on the microscope stage when both the analyzer is inserted on the polarizing microscope. (10 marks)
2.
 - a. What is the significance of planes, axes, and the center of symmetry in crystallography? (15 marks)
 - b. Compare and contrast symmetry of octahedron and cube. (15 marks)
3. Write short notes on any three (03) of the following topics. (30 marks)
 - a. Polymorphism in mineralogy
 - b. Becke line phenomenon
 - c. Pleochroism
 - d. Carbonate minerals
 - e. Bowen's Reaction Series

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