



UNIVERSITY OF RUHUNA

FACULTY OF FISHERIES AND MARINE SCIENCES & TECHNOLOGY

Academic Year 2023/2024

Bachelor of Science Honours in Marine and Freshwater Sciences Degree

Level III Semester I Examination – October / November 2024

OCG 3112: Mineralogy

Time: 1 1/2 hours

Answer all Questions in Part A and only two (02) Questions from Part B

Part B

1.

- i. Explain the physical properties of minerals, providing specific examples to illustrate each property. (15 marks)
- ii. Briefly explain the importance of physical properties of minerals. (05 marks)
- iii. Explain with example why some minerals with the same chemical composition exhibit completely different physical properties. (10 marks)

2.

- i. Illustrate the axes of symmetry for the crystallographic systems you learned. (15 marks)
- ii. Describe with example the relationship between crystal lattice structures and physical properties in minerals. (10 marks)
- iii. Write down the crystal systems associated with the following minerals or mineral groups. (05 marks)
  - a) Quartz
  - b) Garnet
  - c) Pyrite
  - d) Corundum
  - e) Apatite

3.

- i. Provide a detailed description of various subgroups of silicate class of minerals, explaining their structure, composition, and classification. (20 marks)
- ii. Briefly explain the significance of silicates in geological processes and their importance in industry. (10 marks)

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Answer

1 a.  
b.  
c.  
d.

2 a.  
b.  
c.  
d.

3 a.  
b.  
c.  
d.

4 W  
(Y  
a.  
b.  
c.  
d.  
e.  
f.