

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 II Examination - April /May 2025

OCG 3212 – Petrology

Time: 2 hours

Answer all questions in Part A and only Three (03) questions from Part B

PART B

Time: 90 Minutes

1.
 - i. Explain the process of magmatic crystallization and its effect on texture development. [10 marks]
 - ii. Describe how partial melting and decompression melting contributes to formation of magma. [15 marks]
 - iii. Compare explosive and effusive volcanic eruptions. [25 marks]
2.
 - i. Describe marine depositional environments. [25 marks]
 - ii. Define sedimentary structures and explain their importance in interpretation of depositional environments. [25 marks]
3.
 - i. What are the key differences in distinguishing diagenesis from metamorphism? [10 marks]
 - ii. Which metamorphic facies series are classified as low-pressure and low-temperature, and what are their defining characteristics? [15 marks]
 - iii. Discuss the different types of metamorphism and their geological settings. [25 marks]
4. Write 05 short notes on any five (05) of the following topics
 - i. Biochemical sedimentary rocks
 - ii. Ultra-High Temperature (UHT) metamorphism
 - iii. Granulite facies metamorphism
 - iv. Hypabyssal Intrusions
 - v. Tephra and pyroclastic rocks
 - vi. Limestone vs Marble

[10 marks x 05= 50 marks]

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