

# GENERAL CERTIFICATE OF EDUCATION BOARD

## General Certificate of Education Examination

**Geology 2**  
**0755**

**JUNE 2022**

**ADVANCED LEVEL**

Subject Title	<b>Geology</b>
Paper No.	<b>Paper 2</b>
Subject Code No.	<b>0755</b>

**THREE HOURS**

**Answer any FOUR questions.**  
**All QUESTIONS CARRY EQUAL MARKS.**

*You are reminded of the value of clear sketches, even when not specifically demanded by the wording of the question, and of the necessity for good English and orderly presentation in your answers.*

**Turn Over**

1. (a) (i) Define the term crystallographic axes. (3 marks)
- (ii) Describe the variation shown by the crystallographic axes within the various crystal systems. (7 marks)
- (b) (i) Differentiate between the terms polymorphism and pseudomorphism as used in mineralogy, stating ONE example in each case. (6 marks)
- (ii) What is a Solid Solution Series? (4 marks)
- (c) State the sources and the main uses of clay. (5 marks)
- (Total = 25 marks)
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2. (a) Discuss three topographic features of the sea floor. (6 marks)
- (b) (i) Define an intrusion. (2 marks)
- (ii) Describe four major intrusive igneous bodies. (8 marks)
- (c) Explain four magmatic differentiation processes in basaltic magma. (9 marks)
- (Total = 25 marks)
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3. (a) Write short notes on meteorites. (5 marks)
- (b) (i) Outline the properties of body waves. (6 marks)
- (ii) State the various ways by which earthquakes can be predicted. (4 marks)
- (c) (i) With respect to metamorphic rocks, define the term foliation. (2 marks)
- (ii) Account for the formation of foliation in rocks. (2 marks)
- (iii) List two non-foliated metamorphic rocks, stating their conditions of metamorphism, mineralogy and protolith. (6 marks)
- (Total = 25 marks)
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4. (a) (i) What are hot spots? (2 marks)
- (ii) Subduction zones are areas of recycling where all the processes of the rock cycle can be realised. Assess the validity of this statement. (8 marks)
- (b) (i) Differentiate between a joint and a fault. (3 marks)
- (ii) Name and describe TWO Features found in fault zones. (6 marks)
- (iii) How can faults be dated? (4 marks)
- (c) List and locate TWO mineral deposits in Cameroon. (2 marks)
- (Total = 25 marks)
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5. (a) Describe THREE sedimentary structures that can be used to determine the way up of a rock sequence, giving the environment of formation in each case. (9 marks)
- (b) Compare and contrast the weathering of basalts and granites in a humid tropical environment. (8 marks)
- (c) Outline the various methods of sewage disposal. (8 marks)
- (Total = 25 marks)
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6. (a) What do you understand by the following?
- (i) Polyphase metamorphism; (3 marks)
- (ii) Prograde metamorphism; (3 marks)
- (iii) Isochemical metamorphism. (3 marks)
- (b) Discuss the origin and effect of pressure on regional and dynamic metamorphism. (16 marks)
- (Total = 25 marks)