

Geology 2

0755

CAMEROON GENERAL CERTIFICATE OF EDUCATION BOARD

General Certificate of Education Examination

JUNE 2020

ADVANCED LEVEL

Subject Title	Geology
Paper No.	Paper 2
Subject Code No.	0755

GCE REVISION

THREE HOURS

Answer 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.

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Turn Over

1. (a) Discuss Trilobites on the basis of the following:
 - (i) Diagnostic morphological features; (4 marks)
 - (ii) Geological history; (4 marks)
 - (iii) Palaeontological significance. (4 marks)
- (b) Distinguish between the following:
 - (i) Chronostratigraphy and biostratigraphy; (3 marks)
 - (ii) Diachronous bed and marker bed; (3 marks)
 - (iii) Cyclic sedimentation and rhythmic sedimentation; (4 marks)
 - (iv) Relative dating and absolute dating. (3 marks)

(Total = 25 marks)

2. (a) Give a brief outline of the chemistry, diagnostic properties and crystallography of the following minerals:
 - (i) Zircon; (4 marks)
 - (ii) Olivine. (4 marks)
- (b) Write short notes on the following:
 - (i) Crystal twinning; (3 marks)
 - (ii) Parameters of a crystal; (3 marks)
 - (iii) Crystallographic axes. (3 marks)
- (c) Distinguish between the following pairs of terms as applied in hydrogeology:
 - (i) Thermal spring and geyser; (2 marks)
 - (ii) Confined aquifer and unconfined aquifer; (2 marks)
 - (iii) Connate water and juvenile water; (2 marks)
 - (iv) Influent stream and effluent stream. (2 marks)

(Total = 25 marks)

3. (a) Discuss the composition and physical properties of the following parts of the Earth:
 - (i) Crust; (3 marks)
 - (ii) Mantle; (3 marks)
 - (iii) Core. (3 marks)
- (b) Define the following terms:
 - (i) Earthquake magnitude; (2 marks)
 - (ii) Earthquake intensity. (2 marks)
- (c) Name a body wave and outline its properties. (4 marks)
- (d)
 - (i) Define the term Environment. (3 marks)
 - (ii) State three ways by which flooding can be controlled. (3 marks)
 - (iii) Name two localities in Cameroon which are affected by occasional flooding. (2 marks)

(Total = 25 marks)

4. (a) Outline the mineralogy, textures and structures of basalts formed at Mid Oceanic Ridges. (6 marks)
- (b)
 - (i) Describe the following sedimentary rocks: greywackes, arkoses and oolitic limestones. (6 marks)
 - (ii) State the environments of formation of each of these rocks. (3 marks)
- (c) Discuss the effect of thermal metamorphism on impure carbonate rocks. (10 marks)

(Total = 25 marks)

5. (a) With the aid of diagrams, describe and account for the formation of each of the following:
- (i) Horst; (4 marks)
 - (ii) Boudinage. (4 marks)
- (b) Distinguish between each of the following:
- (i) Dip and strike; (3 marks)
 - (ii) Fault breccias and fault gouge. (2 marks)
- (c) Briefly explain the following geological concepts:
- (i) Plate tectonics; (4 marks)
 - (ii) Continental drift; (4 marks)
 - (iii) Seafloor spreading. (4 marks)

(Total = 25 marks)

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6. (a) Discuss the formation and characteristics of the following types of magma:
- (i) Acid magma; (4 marks)
 - (ii) Basic magma. (4 marks)
- (b) Name a locality where the following rocks are found in Cameroon:
- (i) Acid volcanic rocks; (2 marks)
 - (ii) Basic volcanic rocks. (2 marks)
 - (iii) State with reasons the economic importance of the basic volcanic rocks you have stated above. (4 marks)
- (c) Give the role of water in the weathering of rocks and rock-forming minerals. (9 marks)
- (Total = 25 marks)
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