

## THE UNIVERSITY OF BAMENDA

### COMMON ENTRANCE EXAMINATION JULY 2009 SESSION

#### FIRST CYCLE – GENERAL EDUCATION

**PAPER: GEOLOGY (Major)**

**SERIES: GEOLOGY**

**DURATION: 3hrs – COEF 4**

#### **SECTION A**

Answer all the questions in this section by selecting the correct answer from the letters A, B and C.

1. Which of the following parts are found in bi – valves?
 

A. Umbo
B. Ligament
C. Crura
2. The type of energy released from the earth's rocks that causes earthquakes is called:
 

A. Stress energy
B. Shear energy
C. Strain energy

The table below shows the chemical composition (wrt % of oxide) of four plutonic igneous rocks M, N, O and P. Use the table to answer questions 3 and 4.

Oxides	M	N	O	P
SiO	70.8	62.6	41.7	49.0
Al <sub>2</sub> O <sub>3</sub>	14.6	17.6	0.9	18.2
Fe <sub>2</sub> O <sub>3</sub>	1.6	2.1	2.9	3.2
FeO	1.8	2.7	5.7	6.0
MgO	0.9	0.9	47.7	7.6
CaO	2.0	2.3	0.7	11.2
Na <sub>2</sub> O	3.5	5.9	0.1	2.8

<b>K<sub>2</sub>O</b>	<b>4.2</b>	<b>3.2</b>	<b>-</b>	<b>0.9</b>
<b>Others</b>	<b>0.6</b>	<b>1.9</b>	<b>1.3</b>	<b>2.1</b>

3. Why M and N are likely contain alkali – feldspars but not rocks O and P?
  - A. Rocks M and N have a high % of SiO<sub>2</sub> than rocks O and P
  - B. Rocks M and N have a low % of MgO and CaO than rocks O and P.
  - C. Rocks M and N have a high % of Na<sub>2</sub>O and K<sub>2</sub>O than rocks O and P
4. Why would rock P be considered to be hypermelanic?
  - A. It has a low content of SiO<sub>2</sub>
  - B. It has a high content of Al<sub>2</sub>O<sub>3</sub>
  - C. It has o high content of FeO and MgO
5. Around which plate margins would diagenetic changes, folding, magnetic melting and rock foliations be well developed?
  - A. Divergence plate boundaries
  - B. Conservative plate boundaries
  - C. Convergent plate boundaries
6. What would happen if the ice caps of the world completely?
  - A. The land masses around the world would rise
  - B. The surrounding low land masses around the world's oceans would be submerged
  - C. The earth's temperature will rise
7. Why do P and S waves not move on the earth's surface?
  - A. Because they are body waves that only move in the earth
  - B. Because their propagation depends on the density and rigidity od material which are not present on the earth's surface.
  - C. Because they don't have a high amplitude
8. When were the high rocks coals of the world that were being mined today formed?

- A. About 280 million years ago
  - B. Before 350 million years ago
  - C. Before 150 million years ago
9. The following statistics shows a mechanical analysis of grain size distribution in a sedimentary rocks expressed in %:  $4 - 2\text{mm} = 40\%$ ,  $2 - 1\text{mm} = 30\%$ . Select from the list below the type of sedimentary rock that was analyzed:
- A. Anrudite
  - B. An arenite
  - C. A pelite
10. How can you in a map use the width of beds in a faulted syncline to determine the down thrown side?
- A. The width of beds on the down thrown side is wider
  - B. The width of bed on the down thrown side is narrower
  - C. The width of beds on the down throw side is displaced downwards in the direction of movement.

### SECTION B

**Answer one question only**

11. Describe how surface processes can lead to the formation of deposits of economic value.
12. Propose a classification of metamorphic rocks and give an account of the geologic environment in which they are formed.