



**SOUTH EASTERN KENYA UNIVERSITY**  
**UNIVERSITY EXAMINATIONS 2019/2020**

**FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF  
SCIENCE IN GEOLOGY**

**SGL 203: STRUCTURAL GEOLOGY**

**DATE: 6<sup>TH</sup> DECEMBER, 2019**

**TIME: 8.30-10.30AM**

**INSTRUCTIONS TO CANDIDATES**

**ANSWER QUESTION ONE AND ANY OTHER TWO QUESTIONS**

**ILLUSTRATE YOUR ANSWERS BY MEANS OF CAREFULLY DRAWN SKETCHES AND  
DIAGRAMS**

**QUESTION 1 (30 Marks)**

- a) Briefly describe classification of joints (4 Marks)
- b) Describe the various types of unconformities (8 Marks)
- c) Briefly describe sills and dikes (4 marks)
- d) State the three elements that large volcanoes have in common ( 3 marks)
- e) Giving examples state and briefly discuss the terms “ surface and body forces” as used in structural geology (7 Marks)
- f) State the importance of structural geology in various scientific fields (4 marks)

**QUESTION 2**

- (i) Describe the five subdivisions of the East African Rift (EAR) ( 5 marks)
- (ii) Discuss any three of these subdivisions of the (EAR) in terms of these structural evolution (15 Marks)

**QUESTION 3**

- (i) Briefly discuss the technical features of a fault ( 10 Marks)
- (ii) Discuss any three of the bases considered in the classification of folds ( 10 Marks)

#### **QUESTION 4**

Write short notes on the following;

- i. Fault breccias (5 Marks)
- ii. Slickensides (5 Marks)
- iii. Mylonites (5 Marks)
- iv. Feather joints and tensional gashes (5 Marks)

#### **QUESTION 5**

- (i) Discuss any four types of volcanic eruptions (10 Marks)
- (ii) Discuss any five types of sedimentary structures (10 Marks)