



ILARA MOKIN, ONDO STATE

FACULTY OF BASIC AND APPLIED SCIENCES

DEPARTMENT OF PHYSICAL AND CHEMICAL SCIENCES

SECOND SEMESTER BSC EXAMINATIONS 2016/2017 ACADEMIC SESSION

COURSE TITLE: STRUCTURAL GEOLOGY & PLATE TECTONICS CODE: AGY 306

COURSE UNITS: 3

DURATION: 2 ½ Hours

TOTAL MARKS: 60

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HOD's SIGNATURE

**INSTRUCTIONS: ANSWER ANY FOUR (4) QUESTIONS. ILLUSTRATE YOUR ANSWERS WITH GOOD DIAGRAMS**

1. (a) Differentiate between ductile and brittle deformations. (3 marks)  
(b) Differentiate between the following pairs with the aid of diagrams:
  - (i) Anticline and syncline (3 marks)
  - (ii) Normal and reverse faults (3 marks)
  - (iii) Dextral and sinistral faults (3 marks)
  - (iv) Eugeosyncline and miogeosyncline (3 marks)
  
2. (a) Describe the relationship of the various types of faults to the principal stress axes. (5 marks)  
(b) Describe extensional fractures and explain how they form (5 marks)  
(c) Explain the main evidences in support of continental drift. (5 marks)
  
3. (a) Describe the structure of the Earth's interior. (5 marks)  
(b) Explain polar wandering. (4 marks)  
(c) Outline the properties of the following:
  - (i) deviatoric stress (3 marks)
  - (ii) hydrostatic stress (3 marks)
  
4. (a) Outline the factors determining dominant deformation mechanism (5 marks)  
(b) Write short notes on the following:
  - (i) Cataclasis deformation (5 marks)
  - (ii) Pressure solution and its evidences (5 marks)