



**National Open University of Nigeria**  
**Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi - Abuja**  
**Faculty of Science...**  
**2021\_1 EXAMINATION**

**COURSE CODE: EMT 309**

**COURSE TITLE: Environmental Geosciences**

**CREDIT: 2 Units**

**TIME ALLOWED: 2 Hours**

**Instruction:** Attempt question number ONE (1) and any other THREE (3) questions. Question number one (1) is compulsory and carries 25 marks, while the other questions carry equal marks (15) each.

- 1a) 'The earth, the third planet from the sun,' is the home of man. Elucidate. (5 marks)
  - 1b) Discuss how the biosphere has been supporting the existence of man (5 marks)
  - 1c) With the aid of a diagram, show the layers of the atmosphere (5 marks)
  - 1d) Describe the troposphere (4 marks)
  - 1e) Describe the 4<sup>th</sup> layer of the atmosphere (4 marks)
  - 1f) State the 2<sup>nd</sup> and 3<sup>rd</sup> layers of atmosphere (2 marks)
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- 2a) With vivid examples, outline the three forms of anthropogenic hazards (5 marks)
  - 2b) Based on the Plate Tectonic Theory, explain how the plates tectonic operate (5 marks)
  - 2c) Define earthquake and its scales of occurrence (5 marks)
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- 3a) 'Earthquakes are more associated with divergent.' Expatiate. (5 marks)
  - 3b) State the global three major global earthquake zones. (5 marks)
  - 3c) 'Earthquakes cannot be prevented from occurring but they can be monitored and predicted.'  
Outline any five ways of monitoring and predicting earthquakes (5 marks)
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- 4a) Write short note on the characteristics of tsunami (5 marks)
  - 4b) Differentiate between tsunami and ocean waves (5 marks)
  - 4c) Describe the global tsunami's devastating occurrences (5 marks)
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- 5a) Define flood and its corresponding effects on earth (5 marks)
  - 5b) Outline any five measures to mitigate flood (5 marks)
  - 5c) Discuss the following:
    - i. Warm-core cyclones
    - ii. Cyclogenesis
    - iii. Upper level cyclone (5 marks)