

**NATIONAL OPEN UNIVERSITY OF NIGERIA**

UNIVERSITY VILLAGE, PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESS WAY, JABI- ABUJA  
**FACULTY OF EDUCATION**

**JANUARY/FEBRUARY 2017\_2 EXAMINATION**

COURSE CODE: **SED312**

COURSE TITLE: **EARTH AND THE UNIVERSE**

CREDIT UNITS; **2**

INSTRUCTIONS: **ANSWER QUESTION 1 AND ANY OTHER 2 QUESTIONS.**

TIME: **2Hrs**

**QUESTION:**

1. a. Mention **one** feature of each of the following geologic periods: Hadean, Archean Proterozoic, Phanerozoic and Permian. **10 marks**
- b.
  - i. Give a brief description of the outer zones of the earth. **3 marks**
  - ii. Name five mineral deposits found in Nigeria and for each mention at least two specific locations. **10 marks**
  - iii. Identify five problems associated with mining. **5 marks**
  - iv. Describe the formation of Igneous and Sedimentary rocks. **5 marks**
  - v. According to radiometric dating, how old is the earth? **1 mark**
2.
  - a. Geologists use specific properties to identify rocks and minerals. Briefly explain any five of them. **10 marks**
  - b. i. Mention any three (3) areas of benefits in space exploration to global challenges. **3 marks**  
ii. Identify three common Greenhouse gases. **3 marks**
  - c. What is the difference between a solar eclipse and a lunar eclipse? **4 marks**
3. a.
  - i. Mention four characteristics of Sedimentary rocks and briefly describe the formation processes of “mechanically formed sedimentary rock”. **10 marks**
  - ii. Give five economic importance of rocks. **5 marks**
  - b. State the equations for the two processes that remove carbon dioxide from the atmosphere. **5 marks**
4. a. Identify four Greenhouse Gases, and for each mention four sources. **10 marks**  
b. Explain five (5) factors that affect climate globally. **10 marks**
5. a. List four challenges of space exploration. **4 marks**  
b. Discuss five benefits of the International Space Station (ISS). **10 marks**  
c. Explain briefly the three types of solar eclipses. **6 marks**