



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWAY, JABI - ABUJA**  
**FACULTY OF SCIENCES**

**DEPARTMENT OF PURE AND APPLIED SCIENCE**

**2020\_2 EXAMINATIONS**

**COURSE CODE:** PHY 361  
**COURSE TITLE:** GEOPHYSICS II  
**CREDIT UNIT:** 2  
**TIME ALLOWED:** (2 HRS)

**INSTRUCTION:** *Answer question 1 and any other three questions*

**QUESTION 1**

Write short notes on the following terminologies:

- |                    |             |                            |             |
|--------------------|-------------|----------------------------|-------------|
| (i) Seismic zone   | (2.5 Marks) | (ii) Amplification         | (2.5 Marks) |
| (iii) Seismicity   | (2.5 Marks) | (iv) Seismic wave          | (2.5 Marks) |
| (v) Seismography   | (2.5 Marks) | (vi) Fault                 | (2.5 Marks) |
| (vii) Bulk density | (2.5 Marks) | (viii) Travel – time curve | (2.5 marks) |
| (ix) Thrust fault  | (2.5 Marks) | (x) Attenuation            | (2.5 Marks) |

**QUESTION 2**

- a Explain what is meant by Seismic Refraction. (4 Marks)
- b. Briefly discuss the term Critical Distance in seismic refraction (3 Marks)
- c. Differentiate between seismic refraction and seismic tomography (8 Marks)

**QUESTION 3**

- a. Discuss the basic experimental principle of seismic reflection (3 Marks)
- b. List and explain any four sources of noise in seismic reflection method (12 Marks)

**QUESTION 4**

- a. Explain what is meant by Seismic waves (4 Marks)
- b. What are the 3 types of seismic waves produced by earthquake and how do they move? (9 Marks)
- c. As a seismic wavelet propagates further and further through a rock medium, what happens to its amplitude spectrum? (2 Marks)

**QUESTION 5**

a. Explain the any three of following terms:

(i) magnitude            (ii) seismic energy

(iii) Seismic source    (iv) headphone

**(9 Marks)**

b. List any six types of seismic sources

**( 6 Marks)**