



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)