



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

DEPARTMENT OF PURE AND APPLIED SCIENCE

APRIL/MY, 2019 EXAMINATIONS

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

INSTRUCTION: *Answer question One (1) and any other three (3) questions*

QUESTION 1

a. Explain the following terminologies:

- (i) Reflection survey (3 Marks)
- (ii) Positioning shots (3 Marks)
- (iii) Centre shot (3 Marks)
- (iv) Time–distance plots (3 Marks)
- (v) Principal refractors (2 Marks)

b. discuss the basic concept of seismic reflection (3 marks)

c. define seismic wave and differentiate between two broad types of seismic waves. (4marks)

d. state the area of application of seismic reflection (4 marks)

QUESTION 2

a. Briefly describe p and surface waves with relevant equations (7 marks)

b. State four (4) types of interaction between waves and subsurface geology (8 marks)

QUESTION 3

a. State the mathematical assumptions of predictive deconvolution (6 Marks)

b. Enumerate and explain types of deconvolution (9 Marks)

QUESTION 4

a. List five (5) types of seismic sources. (5 marks)

b. Describe briefly, three (3) seismic sources (6 marks)

c. Enumerate two types method of acquisition of surface wave data.

(4 marks)

QUESTION 5

a. Briefly describe the basic theory of Electrical resistivity.

(7.5 Marks)

b. State five (5) areas of application of this method.

(7.5 Marks)