



NATIONAL OPEN UNIVERSITY OF NIGERIA
Plot 91 Cadastral Zone, Nnamdi Azikwe Express Way, Jabi, Abuja.
DEPARTMENT OF SCIENCE EDUCATION

EXAMINATION: 2021_1 _
COURSE CODE: SED312
COURSE TITLE: EARTH AND THE UNIVERSE
CREDIT UNIT: 2
TIME ALLOWED: 2HOURS
INSTRUCTION: ANSWER QUESTION ONE AND ANY OTHER TWO

QUESTION 1

Ozone layer depletion has become a topical issue in most of the world's conferences on the prevention of environmental degradation.

- (a) Describe ozone layer citing two (2) important points **(4 marks)**
 - (b) In what four (4) ways can ozone layer be sustained? **(8 marks)**
 - (c) Briefly describe four (4) ways by which ozone layer get depleted. **(8 marks)**
 - (d) What four (4) effort have been made to prevent further depletion of ozone layer? **(8 marks)**
 - (e) Write out the chemical reactions involved in ozone layer depletion through nitric oxide **(2 marks)**
- (30 marks)**

QUESTION 2

Besides the popular usage of the word "moon" in the narration of tales by moonlight, present a brief scientific fact about moon, citing two (2) points each on:

- a) General Description **(4 marks)**
 - b) The formation **(4 marks)**
 - c) The internal structure **(4 marks)**
 - d) The surface composition **(4 marks)**
 - e) The atmosphere of the moon, towards improving the knowledge base of students beyond the storytelling narratives. **(4 marks)**
- (20 marks)**

QUESTION 3

The rotation of the moon around the earth has been characterized with different phases or stages.

- (a) Complete the diagrammatic illustration below to show the different stages of how the moon change its phases from the new moon to another new moon. **(10 marks)**



- (b) Give a short description of any three (3) of the phases of the moon cycle. **(6 marks)**
- (c) When and how does eclipse of the sun and lunar eclipse occur? State one major distinguishing factor among the two **(4 marks)**

(20 marks)

QUESTION 4

(a) What difference can you point out from the word “astronomy” and “astrology”? **(4 marks)**

(b) You have been charged with the responsibility of counselling some physics students who showed strong interest in space science on career opportunities in astronomy. Prepare a comprehensive presentation, using a chart to illustrate eight (8) different fields in space science. **(16 marks)**

(20 marks)