



NATIONAL OPEN UNIVERSITY OF NIGERIA
PLOT 91 UNIVERSITY VILLAGE, JABI CADASTRAL ZONE, AIRPORT ROAD, JABI, ABUJA
FACULTY OF SCIENCES
JANUARY, 2021 EXAMINATION

COURSE TITLE: SOIL ECOLOGY

COURSE CODE: BIO 408

TIME ALLOWED: 2 HOURS

CREDIT UNIT: 2 CREDIT UNITS

INSTRUCTION: ANSWER QUESTION 1 AND ANY OTHER THREE QUESTIONS

- 1 (a) (i) Explain the effects of soil on matrix potential **(4marks)**
(ii) Give an account of Soil effects on osmotic potentials **(5marks)**
(b) Describe the Andisols, their distribution and uses **(5marks)**
(c) State the importance of monitoring in soil ecology **(5marks)**
(d) Describe the application of soil analysis in soil ecology **(6marks)**
2. (a) Succinctly explain soil formation processes **(6 marks)**
(b) Explain biochemical weathering **(4marks)**
(c) Write on the Bases of soil classification **(5marks)**
3. (a) (i) What is soil structure? **(3marks)**
(ii) Explain the soil shape “spheroidal” **(3 marks)**
(b) (i) Describe soil pore size **(4marks)**
(ii) How is block-like structure described? **(2marks)**
(c) What is plate soil structure? **(3marks)**
4. (a) Explain the chemical nature of soil **(5marks)**
(b) Describe inorganic and organic soil **(5marks)**
(c) Explain the reaction of soil **(5marks)**
5. (a) (i) How would you explain biogeochemical cycling **(4marks)**
(ii) What are the major characteristics of biogeochemical cycles **(4marks?)**
(b) Briefly describe sulfur and its significant **(4marks)**
(c) Write a short note on the Detrivores **(3marks)**