



NATIONAL OPEN UNIVERSITY OF NIGERIA
PLOT 91 UNIVERSITY VILLAGE, JABI CADASTRAL ZONE, AIRPORT ROAD, JABI, ABUJA
FACULTY OF SCIENCES
SEPTEMBER 2020_1, 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) What do you understand by the term soil? **(3marks)**
(ii) List and briefly explain any four factors that affect soil formation **(8marks)**
(b) Briefly describe the weathering processes of soil **(6marks)**
(c) Define soil moisture regime and explain any four moisture regime **(8marks)**
- 2(a) Account for the basis of soil classification **(5 marks)**
(b) Explain the soil surface horizons **(5marks)**
(c) What are Gelisols and their distributional uses **(5marks)**
- 3(a) (i) How does temperature affects nutrients limitation **(4marks)**
(ii) pH limitation of nutrients **(3marks)**
(b) Explain soil structure and composition as nutrient limitation **(5marks)**
(c) What role does biological activity play in nutrient limitation **(3marks)**
- 4(a) What is Osmotic potential as used in soil ecology? **(5marks)**
(b) Write on Organic Material Decomposition as an advantage of soil organisms **(4marks)**
(c) (i) How does organic matter affects the growth of soil organism **(3marks)**
(ii) Explain calcium and pH as factors affecting the growth of soil organism **(3marks)**
- 5(a) Briefly describe soil pore sizes **(5marks)**
(b) What is soil structure? **(5marks)**
(c) Give a brief description of soil texture **(5marks)**