



NATIONAL OPEN UNIVERSITY OF NIGERIA
14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS
MARCH/APRIL 2016 EXAMINATION

SCHOOL OF SCIENCE AND TECHNOLOGY

COURSE CODE: BIO408
COURSE TITLE: SOIL ECOLOGY

TIME ALLOWED: 2 HOURS

INSTRUCTION: ANSWER QUESTION 1 AND ANY OTHER THREE QUESTIONS

1. (a). Parent materials, climate, biota, topography and time are major factors that determine soil formation. Discuss (10 marks)

(b). Present the important groups of soil organisms in **a table** under the headings shown below: (15 marks)
 - (i). General Grouping
 - (ii). Specific grouping
 - (iii). Examples
2. (a). Present the sulphur cycle with a schematic diagram (6 marks)
(b). Discuss briefly three main sources of soil nutrient (9 marks)
3. (a). Discuss briefly the basic types of biogeochemical cycle (10 marks)
(b). List any **ten** soil orders (5 marks)
4. What factors limit nutrients in the soil? Discuss them. (15 marks)
5. (a). Briefly discuss soil water content - potential relationship (9 marks)
(b). Compacting a soil would likely reduce the amount of water available to growing plants. Give **four** reasons for this. (6 marks)
6. (a). Summarize the carbon cycle using a schematic diagram. (9 marks)
(b). Explain briefly soil osmotic potential (6 marks)