



UNIVERSITY OF EDUCATION, WINNEBA
INSTITUTE FOR TEACHER EDUCATION AND
CONTINUING
PROFESSIONAL DEVELOPMENT (ITECPD)



END OF FIRST SEMESTER EXAMINATIONS, APRIL, 2024

LEVEL 200

COURSE CODE: JBI 231

COURSE TITLE: ENVIRONMENTAL BIOLOGY

DURATION: 2 HRS

STUDENT'S INDEX NUMBER:

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GENERAL INSTRUCTIONS:

- This paper is made up of ONE SECTION.
- The Section is made up of five essay type questions.
- Answer any THREE questions in your answer booklet.
- Each question carries equal marks. You are expected to start each question on a new page.
- You are expected to hand over your answer booklet to the invigilator before you leave the examination hall.

Instruction: Answer any three (3) questions in the answer booklet provided.

1. a. What is a lesson plan? (4marks)
b. How would you explain to a BS 8 learner the significance of crop rotation to the environment concerning;
 - i. Erosion (2marks)

- ii. Soil fertility (2marks)
- iii. Water conservation (2marks)
- iv. Pest and diseases (2marks)

c. Define each of the following terms;

- i. Population (2marks)
- ii. Habitat (2marks)
- iii. Ecosystem (2marks)
- iv. Environment (2marks)

2. a. List and explain any **four (4)** points which you may include in your speech.

(8marks)

b. List any **two (2)** greenhouse gases

(2marks)

c. Define the following terms;

- i. Nitrogen fixation (2marks)
- ii. Nitrification (2marks)
- iii. Ammonification (2marks)

d. Distinguish between tissue respiration and gaseous exchange (4marks)

3. a. Give any **four (4)** factors a science teacher needs to consider before the preparation of a lesson plan. (4marks)

b. List two general characteristics of organisms in the following kingdoms and name one organism in each kingdom;

- i. Animalia (3marks)
- ii. Plantae (3marks)
- iii. Prokaryotae (3marks)

- c. Define the following:
- i. denitrification. (3marks)
 - ii. farming system (2marks)
 - iii. a complete flower (2marks)
4. a. In a school where you had your STS, the science teacher(s) was/were observed not to prepare the daily lesson plan. Mention and briefly discuss any **four (4)** effects of this practice on teaching and learning. (8marks)
- b. List any **four (4)** types of farming systems. (4marks)
- c. Explain the following terms;
- i. Taxonomy (2marks)
 - ii. Biological nomenclature (2marks)
- d. State **four (4)** differences between photosynthesis and respiration (4marks)
5. a. What is a performance indicator? (2marks)
- b. Carbon is an essential element in the lives of living organisms. For the optimum maintenance of carbon in the ecosystem, effective carbon cycle paths are needed.
- i. State the **two (2)** main carbon cycle pathways. (2marks)
 - ii. In brief, discuss the two (2) main carbon cycle pathways. (2marks)
- c. Describe **four (4)** disorders or problems associated with the respiratory system. (12 marks)
- d. Give **one (1)** distinction between monoculture and mono-cropping. (2marks)