



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



END OF FIRST SEMESTER EXAMINATIONS, APRIL, 2024

LEVEL 300

COURSE CODE: PBI 351

COURSE TITLE: INTEGRATED SCIENCE III FOR UPPER PRIMARY

TIME ALLOWED: 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.

- Q1a. (i) What is the primary function of sepals in a flower? **2 marks**
- (ii) What distinguishes the pistil as the female part of the flower? **4 marks**
- b. Describe the process of fertilization in flowering plants, including the key events that occur. **8 marks**
- c. What are the three primary parts of a seed and their functions? **6 marks**
- Q2a. What is seed germination, and what are the key stages involved in the process? **6 marks**

b. What are the major components of air, and what are their respective percentages by volume? **10 marks**

c. Differentiate between luminous and non-luminous objects, and provide examples of each. **4 marks**

Q3a. (i) Describe to the Basic six learner, **three (3)** importance of oxygen in various aspects of life. **6 marks**

(ii) Explain how the concept of light propagation relates to the formation of shadows. **4 marks**

b. Describe the process of melting and its implications for the arrangement of particles in a solid. **4 marks**

c. (i) Discuss the role of the digestive system in nutrient absorption and its interaction with the circulatory system. **4 marks**

(ii) What role do core competencies play in the teaching and learning process? **2 marks**

Q4a. (i) What should be included in the assessment phase of a lesson? **2 marks**

(ii) What is the purpose of the plenary/reflection phase in a lesson? **2 marks**

b. (i) Explain how the skeletal system provides support, protection, and facilitates movement, considering its interaction with the muscular and circulatory systems. **6 marks**

(ii) Explain the process of evaporation and how it leads to cooling. **4 marks**

c. (i) Describe the role of stamens in the reproductive cycle of a flower. **4 marks**

(ii) What are the features of animal-dispersed fruits and seeds? **2 marks**

Q5a. (i) Explain **two (2)** importance of dispersal of fruits and seeds in plant ecology. **4marks**

- (ii) Explain the significance of oxygen in seed germination. **4 marks**
- b. (i) Define pollination and explain its significance in plant reproduction. **4 marks**
(ii) How do humans contribute to the dispersal of fruits and seeds? **2 marks**
- c. (i) Explain the significance of carbon dioxide in plant physiology and industrial applications. **4 marks**
(ii) What are the sources of light, and how are they classified **2 marks**

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