UNIVERSITY OF EDUCATION, WINNEBA
INSTITUTE FOR TEACHER EDUCATION AND CONTINUING PROFESSIONAL DEVELOPMENT (ITECPD)
END-OF-FIRST-SEMESTER EXAMINATIONS. MAY/JUNE, 2023

LEVEL 100
COURSE CODE: EBC113
COURSE TITLE: INTRODUCTION TO INTEGRATED SCIENCE I
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 six essay type questions.
- Answer any FOUR questions into your answer booklet.
- Each question carries equal marks. You are expected to start each question on a new page.
- You are expected to handover your answer booklet to the invigilator before you leave the examination hall.

Instruction: *Answer any four (4) of the questions in the answer booklet provided.*

1(a) List the four (4) developmental stages of science growth. **(4marks)**

(b) Name the five (5) eminent scientists you have studied in science. **(5marks)**

(c) State five (5) impact of science and technology on peace in our society. **(5marks)**

(d) (i) What is process of science? **(3marks)**

(ii) Explain the following processes of science in the basic school science curriculum.

α Observing
β Inferring
γ Analysing
δ Designing

knowlegd

2 (a) Explain the following learning styles:
    (i)   Visual learner   **(2 marks)**
    (ii)   Auditory learner   **(2 marks)**
    (iii)   Kinesthetic learner   **(2 marks)**
  (b) (i) Differentiate between centripetal force and centrifugal force.   **(2 marks)**
     (ii) Write down four (4) effects of a force on an object.   **(2 marks)**
     (iii) Define revolution with respect to the Earth and the Sun.   **(2 marks)**
  (c) (i) During a science class, a colleague in the class was no longer breathing and the science teacher used mouth-to-mouth resuscitation to revive him or her. State the procedures that your teacher used in reviving the colleague. **(8 marks)**

     (ii) Explain with three (3) examples why science is said to be a product. **(3 marks)**

3 (a) Describe an experiment to measure the volume of an irregular object (stone). **(10 marks)**

  (b) Mention five (5) items that must be included in the students' portfolio **(5marks)**

  (c) In a tabular form, outline four (4) differences between science and technology. **(4 marks)**

  (d) Enumerate three (3) importance of self-awareness. **(6 marks)**

4 (a) Discuss two (2) effects of Earth's revolution around the sun. **(6 marks)**
  (b) State five (5) characteristics of visual learners. **(5 marks)**
  (c) (i) State the three (3) expected learning behaviours in the science curriculum. **(3 marks)**

    (ii) Explain the following terms as used in the science curriculum:
     α Strand
     β Content standard
     γ Exemplar **(6 marks)**

  (d) In an experiment to determine physical quantity, instruments are used to measure the quantity. Copy and complete the following table below:

Quantity	Measuring Instruments	S.I. Unit
Temperature		Kelvin (K)
Amount of Substance		Mole (mol)
	Ammeter	
Luminous Intensity		Candela (cd)

(5marks)

5 (a) (i) State the law of conservation of matter. (2 marks)
   (ii) List four (4) things that are not forms of matter. (2 marks)
   (iii) State two (2) properties that are used in classifying matter in different forms. (2 marks)
   (iv) What is matter? (2 marks)
   (b) Explain the following hazard signs:
      (i) Warning sign
      (ii) Prohibition sign
      (iii) Mandatory sign
      (iv) Safe condition sign (8marks)
   (c) (i) State two (2) forces that affect the motion of a body. (2marks)
      (ii) Calculate the force a man exerted in lifting a cement bag of mass 5000 grams from the ground to the top of a table. (g = 9.8ms^{-2})
   (d) Name the two (2) elements that was discovered by Marie Curie. (2marks)

6 (a) (i) During STS observation, the science teacher taught a lesson on the topic forces. Write down three (3) performance indicators which the teacher used in teaching the lesson of forces. (6marks)
      (ii) State three (3) effects of friction on a machine used in doing work. (3 marks)
   (b) State the three (3) basic laws of motion discussed by Isaac Newton. (6 marks)
   (c) Explain and give two (2) examples each of the following:
      (i) Contact force (3 marks)
      (ii) Field force (3 marks)
   (d) State two differences between mass and weight. (4 marks)

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