



AKENTEN APPIAH-MENKA UNIVERSITY OF SKILLS TRAINING
AND ENTREPRENEURIAL DEVELOPMENT
INSTITUTE FOR TEACHER PROFESSIONAL DEVELOPMENT AND
LIFELONG LEARNING (ITPDLL)
END OF FIRST SEMESTER EXAMINATION 2024/2025

COURSE CODE	ECS 115
COURSE TITLE	INTRODUCTION TO INTEGRATED SCIENCE I
DURATION	TWO HOURS

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SECTION A (20 MARKS)

Each of the questions below is followed by four options, lettered A, B, C, and D. Choose the option that best completes each statement and write the letter A, B, C, or D of the option you have chosen in your Answer Booklet.

1. Anything that has mass and can occupy space is called?
 - A. Atom
 - B. Compound
 - C. Element
 - D. Matter
2. Which of the following is a fundamental unit of length?
 - A. Ampere
 - B. Kilogram
 - C. Meter
 - D. Second
3. Which term refers to the consistency of repeated measurements?
 - A. Accuracy
 - B. Precision
 - C. Speed
 - D. Volume
4. A pure substance that cannot be broken down into a simpler substance by physical and chemical reactions
 - A. Atom
 - B. Compound
 - C. Element
 - D. Ion

5. What is the primary purpose of first aid? To
- A. delay seeking medical help.
 - B. diagnose medical conditions.
 - C. provide immediate care to prevent further harm.
 - D. replace professional medical treatment.
6. Which scientist is renowned for the pioneering research on radioactivity?
- A. Marian E. Addy
 - B. Marie Curie
 - C. Professor Francis Allotey
 - D. Stephen Hawking
7. The following are fundamental quantities **except**?
- A. Amount of substance
 - B. Electric current
 - C. Mass
 - D. Weight
8. The state of matter that exists at high temperatures and pressures is known as
- A. Gaseous
 - B. Liquid
 - C. Plasma
 - D. Solid
9. In which state of matter do particles have the least amount of energy?
- A. Gas
 - B. Liquid
 - C. Plasma
 - D. Solid
10. The most abundant gas in the atmosphere is
- A. Carbon dioxide
 - B. Nitrogen
 - C. Oxygen
 - D. Water vapour

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SECTION C: MATCHING (5 MARKS)

This section contains two columns, columns A and B. You are to match items in Column A with those in Column B.

Column A	Column B
26. Gravitational force	(A) Ama pushes her table across the room
27. Weight	(B) Yaw Grinds his tomatoes on a grinding stone
28. Applied force	(C) A string is pulled tight by forces acting from opposite ends
29. Frictional force	(D) Gravitational pull of the earth on an object
30. Tensional force	(E) A mango falling from a tree

SECTION D (10 MARKS)

Provide short answers to the following questions

31. A push or pull upon an object resulting from the object's interaction with another object is.....
32. The type of force which opposes the relative motion of two surfaces in contact is
33. A patient recorded a body temperature of 142 K. This is equivalent to..... on the Celsius scale.
34. Collecting and evaluating information about learners and using the information to make decisions to improve their learning is termed as
35. A period in a year where there are shorter days or longer days is referred to as.....
36. A..... can be used to measure the diameter of a metallic ball.
37. Neon signs and fluorescent lights are all made of substances in thestate of matter.
38. are symbols that give warning about chemicals, equipment and places.
39. The wear and tear of machine parts is as a result of..... force.
40. The competency instilled in learners that enables them to improve on their self-awareness and build their self-esteem is called.....

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SECTION E (20 MARKS)

Please answer only One question from this section

1. (a) Explain the term *portfolio*. 4 marks
- (b) List *chronologically* the scientific method. 8 marks
- (c) Miss Oforiwaa wrote the annotation **B1.2.3.2.1** in her lesson plan. Use it to answer the questions which follow:

- i) What class was Miss Oforiwaa going to teach? 2 marks
- ii) Mention the strand topic of the science curriculum she was going to teach.

2 marks

- iii) State what the following in the annotation represent:

(α) 3 2 marks

(β) 1 2 marks

2. (a) State three child learning styles

3marks

- (b) Give three differences between rotation and revolution of the earth

3marks

- (c) State four differences between balanced and unbalanced forces?

4marks

- (d). What is the **plasma** state of matter, and how does it differ from the other states?

4marks

- (e) Defined the following terms

i. heterogeneous mixture 2marks

ii. Homogeneous mixtures 2marks

ii. Deposition 2marks

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11. The term which describes the irreversible increment in the size of a living thing is...
- A. Respiration
 - B. Excretion
 - C. Growth
 - D. Irritability
12. When matter gains or loses heat, it...
- A. Becomes distorted
 - B. Changes colour
 - C. Changes state
 - D. Gains energy
13. The physical process involved in the change of substances from solid state directly to gaseous state is called
- A. Condensation
 - B. Deposition
 - C. Melting
 - D. Sublimation
14. Which of the following is a homogeneous mixture?
- A. Element
 - B. Solute
 - C. Solution
 - D. Solvent
15. The following are all renewable resources **except**
- A. Coal
 - B. Forest
 - C. Wildlife
 - D. Wind
16. The force exerted on a body as a result of gravity is known as...
- A. Force of gravity
 - B. Gravitational force
 - C. Strain force
 - D. Weight

17. The weight of a body of mass 50g is [Take $g = 10\text{ms}^{-2}$]

- A. 0.5N
- B. 5N
- C. 50N
- D. 500N

18. Which of the following causes changes in the seasons?

- A. Revolution of the earth
- B. Rotation of the earth
- C. Spinning of the earth
- D. Tilting of the earth

19. The earth's axis is tilted at an angle of about ...

- A. 24.3°
- B. 3.4°
- C. 32.4°
- D. 34.2°

20. The period in the Stone Age science characterized by domestication of animals, development of ground stone tools is known as...period.

- A. Mesolithic
- B. Metheolithic
- C. Neolithic
- D. Palacolithic

SECTION B (5 MARKS)

This section contains statements. Write true or false for each of the following statements

- 21. The earliest roots of science can be traced to ancient Egypt and Mesopotamia
- 22. Mass is appropriately measured with spring balance
- 23. Growth is a life process responsible for the transfer of characteristics from parents to offspring
- 24. Change of state of matter occur at constant temperature
- 25. In the metric system of measurement, the selected unit of measurement for length, mass and time is metre, kilogram and second.

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3. (a) State **four (4)** key values in measurement? **4marks**
- (b). Describe the characteristics of each of the following states of matter, solid, liquid and gas **6marks**
- (c) What is a curriculum? **2marks**
- (d) Describe how to measure the volume of an irregular object (stone) **8marks**

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