



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

COURSE CODE	ESC 237
COURSE TITLE	INTRODUCTION TO EARLY GRADE SCIENCE I

VISIT: COLEMANPUBLICATIONS.COM FOR MORE

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. Which of the following is true about nonliving things? They...
 - a) can reproduce.
 - b) can grow and develop.
 - c) do not require energy.
 - d) respond to stimuli.
2. Which of the following is an example of a living organism that can make its food?
 - a) Fish
 - b) Lion
 - c) Mushroom
 - d) Rose plant
3. Which of the following processes is common to all living organisms?
 - a) Combustion
 - b) Evaporation
 - c) Photosynthesis
 - d) Respiration
4. Which of the following is true about viruses? They are...
 - a) They are considered living organisms.
 - b) They can reproduce on their own.
 - c) They are considered nonliving outside a host cell.
 - d) They do not contain genetic material.

5. Which of the following is an example of a nonliving thing that can grow in size?
- a) Bacteria
 - b) Crystal
 - c) Dog
 - d) Tree
6. A teacher asks students to classify a wooden table into living and non-living things. Which is the best reason why it is non-living? It is described as a non-living thing because...
- a) can be used by humans
 - b) does not grow or reproduce
 - c) it is made of natural material
 - d) it was once part of a living tree
7. Which of the following is a key difference between living and non-living things?
- Living things...
- a) are small, while non-living things are large
 - b) are always green, while non-living things are not
 - c) can move, but non-living things cannot
 - d) grow and reproduce, but non-living things do not
8. A student is confused about whether a seed is a living thing. What should the teacher explain? A seed is ...
- a) non-living because it does not move.
 - b) living because it can grow under the right conditions.
 - c) non-living because it does not eat food.
 - d) living because it is found in nature.
9. A student argues that a car is a living thing because it moves. What is the best response?
- Car are...
- a) living because they need fuel.
 - b) non-living because they do not grow or reproduce.
 - c) living because they can make noise.
 - d) non-living because humans use them.

VISI: COLEMANPUBLICATIONS.COM FOR MORE

10. A student claims that a virus is a living organism. As an education instructor, how would you challenge this claim?
- a) Argue that viruses are too small to be considered living
 - b) Explain that viruses do not have a nucleus
 - c) Show that viruses cannot reproduce without a host cell
 - d) Point out that viruses do not grow in size
11. During a lesson on living and non-living things, a student asks why fire is not considered a living thing, even though it grows and needs oxygen. What is the best response? Fire...
- a) cannot move from one place to another.
 - b) is too dangerous to be classified as living.
 - c) does not have cells or reproduce independently.
 - d) only exists temporarily, so it does not qualify.
12. Which of these is the largest object in our solar system?
- a) Earth
 - b) Jupiter
 - c) The Sun
 - d) The Moon
13. What is a group of stars forming a recognizable pattern called?
- a) Constellation
 - b) Galaxy
 - c) Nebula
 - d) Solar system
14. Which galaxy is Earth located in?
- a) Andromeda
 - b) Milky Way
 - c) Triangulum
 - d) Whirlpool
15. What is the name of the brightest star in the night sky?
- a) Alpha Centauri
 - b) Polaris
 - c) Sirius
 - d) Vega

VISIT: COLEMANPUBLICATIONS.COM FOR MORE

16. A teacher asks students to observe the Moon for a week and record its shape. What is the best explanation for why the Moon appears to change shape?
- a) Clouds are blocking part of the Moon each night
 - b) The Moon is growing and shrinking
 - c) The Moon reflects different amounts of sunlight as it orbits Earth
 - d) The Moon is moving closer and farther from Earth
17. A farmer notices that the Sun rises and sets at different points on the horizon during different times of the year. What causes this change? The...
- a) Earth's orbit around the Sun is an ellipse, not a perfect circle
 - b) Earth's tilt changes throughout the year
 - c) Earth's rotation speed changes throughout the year
 - d) Sun moves closer and farther from Earth each season
18. A teacher is explaining eclipses to students. A student asks why lunar eclipses do not happen every full moon. What is the best response?
- a) Lunar eclipses only occur when the Moon is closest to the Sun
 - b) The Earth's shadow is too small to block the Moon every month
 - c) The Moon's orbit is tilted, so it does not always pass through Earth's shadow
 - d) The Sun is too far away to cause frequent eclipses
19. A scientist wants to observe a planet that is only visible in the early morning before sunrise. Which of the following is most likely to be the planet?
- a) Mars
 - b) Neptune
 - c) Saturn
 - d) Venus
20. A teacher uses a globe and a flashlight to demonstrate day and night. A student asks why we experience different time zones around the world. What is the best answer?
- a) Different places on Earth receive sunlight at different times due to Earth's rotation
 - b) Earth's distance from the Sun changes throughout the day
 - c) The Moon blocks sunlight at different locations each day
 - d) The Sun moves around Earth at different speeds

SECTION B (5 MARKS)

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

- 21. Inclusive science teaching only involves accommodating students with disabilities.
- 22. Active learning strategies can reduce achievement gaps in science courses.
- 23. Providing lecture slides in advance is sufficient to ensure accessibility for all students.

24. Culturally responsive teaching in science means avoiding controversial topics to prevent discomfort.
25. Universal Design for Learning (UDL) principles suggest that instructors should offer only one way to complete assignments to maintain fairness.

SECTION C (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 (Effect)	Column B (Explanation)
26. Sleep patterns	A. Increased outdoor activities and productivity
27. Vitamin D production	B. Exposure to sunlight helps the body produce this essential vitamin
28. Body temperature changes	C. Core temperature drops at night to promote sleep
29. Work and school schedules	D. Humans are more active during daylight hours
30. Emotional well-being	E. Production of Ozone Layer
	F. The moon promotes sleep.
	G. Lack of sunlight can lead to mood disorders like seasonal depression

SECTION D (10 MARKS)

Provide short answers to the following questions

31. The mass of an object remains constant, whereas itscan vary with gravitational acceleration.
32. The volume of an irregular solid can be determined using.....displacement.
33. Water and air are.....things that are essential for the survival of living organisms.
34. All living organisms are made up of tiny units called.....
35. Animals that eat both plants and other animals are called.....
36. The process by which plants lose water through their leaves is called.....
37. The primary cause of day and night is the.....of the Earth on its axis.
38. Earth completes one full rotation in approximately.....hours.
39. The imaginary line around which Earth rotates is called the.....
40. The side of Earth facing the Sun experiences..... while the opposite side experiences.....

VISIT: COLEMANPUBLICATIONS.COM FOR MORE

SECTION E (20 MARKS)

Answer only One question from this section

41. (a) Briefly explain the formation of day and night. (6 Marks)
(b) Explain what would happen to mankind if the sun were too far or too close to the earth. (6 Marks)
(c). Mention four (4) reasons why trees are regarded as living things (8 Marks)
42. (a). Enumerate four (4) importance of movements in living organisms (8 Marks)
(b). State four (4) reasons why even though cars can move, they are still regarded as non-living things. (8 Marks)
(c). Briefly explain why sometimes, it will be day time in Ghana, but it may be night in certain places like Europe (4 Marks)
43. (a). State the eight (8) planets in descending order from the Sun. (8 Marks)
(b). Which of the planets is described as the dwarf planet? (2Marks)
(c). Briefly explain (5) ways basic teachers can ensure inclusive science teaching (10 Marks)

VISI: COLEMANPUBLICATIONS.COM FOR MORE