



**SIR ARTHUR LEWIS COMMUNITY COLLEGE
ACADEMIC YEAR (2024/2025) – SEMESTER TWO
END OF SEMESTER FINAL EXAMINATION**

COURSE CODE : SCI1001 – FINAL

COURSE TITLE : General Science

LECTURER(S) : Dr. Leonard Johnny

DATE : APRIL 29, 2025

TIME : 1:00 PM

DURATION : 1 hour 45 minutes

STUDENT ID # : _____

GENERAL INFORMATION AND INSTRUCTIONS

- Students must sign **IN** and **OUT** on the examination class list.
- Write your ID number on the question paper.
- This paper is worth 60 marks and comprises Two (2) sections.
- Section One: 35 multiple choice questions - (35 marks)
- Section two: 1 structured question - (25 marks)

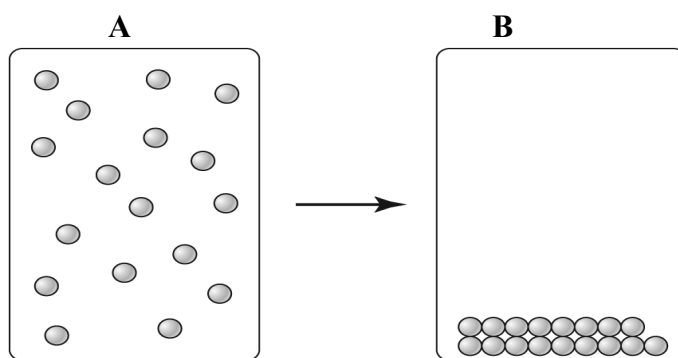
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SECTION ONE – MULTIPLE CHOICE QUESTIONS

INSTRUCTION: *Circle the letter that corresponds to the correct answer for each question.*

- Which of the following substances is an example of non-matter?
(a) Heat (b) Wind (c) Helium (d) Air
- Tony mistakenly left a cup with water outside in the yard on the step in the morning. When he returned from school he picked up the cup and realized that it was empty. There was no water in the cup because _____ took place.
(a) Sublimation (b) Condensation (c) Evaporation (d) Boiling
- Which of the following processes describe the following observation: Cucumber slices become soft and leak water after salt and pepper are added?
(a) Osmosis (c) Diffusion
(b) Brownian Motion (d) Sublimation
- Which of the following substances is a homogeneous mixture?
(a) Iron (b) Salt (c) Bronze (d) Milk
- Jack accidentally threw some sand into a glass of water that was left on the counter in the kitchen. Which separation technique is MOST appropriate for removing the sand from the water?
(a) Chromatography (c) Filtration
(b) Fractional Distillation (d) Separating Funnel
- Iodine is a bluish black solid that on heating becomes a violet gas. This change of state is known as _____.
(a) Evaporation (b) Condensation (c) Boiling (d) Sublimation
- Pick out the sentence that describes a chemical change from the list below
(a) Copper sulphate crystals dissolved in a beaker of water
(b) Water boiling on a stove
(c) Magnesium ribbon burned in the presence of air
(d) Copper sulphate crystals crushed using a mortar and pestle
- _____ is an example of a colloid.
(a) Air (b) milk (c) water (d) steel
- Which of the following is NOT a characteristic of a Pure Substance?
(a) Indefinite composition
(b) Shows only one spot when analyzed by chromatography
(c) Fixed melting points and boiling points
(d) Can be either an element or a compound
- Which of the following is the BEST technique for separating the components of black dye?
(a) Evaporation (c) Filtration
(b) Recrystallization (d) Chromatography

11. Atoms are neutral. This means that:
- (a) they have no charged particles
 - (b) they have the same number of neutrons and protons
 - (c) their valence shells have the same number of electrons as an inert gas
 - (d) the amount of positive charge in the atom equals the amount of negative charge.
12. What household item has the formula NaCl?
- (a) Sugar
 - (b) Common salt
 - (c) Ammonia
 - (d) Vinegar



Questions 13 – 15 refer to the diagram above

13. The diagram above models a change that occurs in matter. Based on what you know about changes in matter, explain why the diagram shows a physical change rather than a chemical change from A to B.
- (a) The particles get smaller
 - (b) The volume of the matter decreases
 - (c) The composition of the matter stays the same
 - (d) The particles change into particles of different substances
14. The arrangement of particles in substance A in the diagram above suggests that it is
- (a) Suspension
 - (b) Gas
 - (c) Liquid
 - (d) Solution
15. The process taking place as A changes to B (in the diagram above) is called _____.
- (a) Freezing
 - (b) Melting
 - (c) Evaporation
 - (d) Condensation
16. Marco tears a piece of notebook paper into smaller pieces. Tearing paper into pieces is an example of what kind of change?
- (a) a change in mass
 - (b) a physical change
 - (c) a chemical change
 - (d) a change in energy
17. There are several differences between chemical and physical changes. Which process is an example of a chemical change?
- (a) Steam rising from a boiling pot of soup
 - (b) A metal railing rusting in damp weather
 - (c) Alcohol evaporating from a cotton swab
 - (d) A piece of wood shrinking as it dries out
18. Which of the following elements has the symbol 'Na'?
- (a) Sulphur
 - (b) Sodium
 - (c) Nitrogen
 - (d) Nano

19. In the laboratory, Austin is given a mixture of iron filings, sand, and salt. To separate the mixture, Austin uses a magnet, boiling water, and a filter. Which statement is true about the process Austin uses to separate this mixture?
- Austin uses only physical changes to separate the mixture's components.
 - Austin uses only chemical changes to separate the mixture's component
 - Austin uses both physical and chemical changes to separate the mixture's components
 - Austin uses neither physical nor chemical changes to separate the mixture's components
20. All of the following are states of matter EXCEPT:
- solid
 - liquid
 - gas
 - putty
21. This matter has a fixed shape and volume with particles closely packed together with little movement. It is a:
- Liquid
 - Solid
 - Gas
 - Plasma
22. The boiling point of water is:
- 0°C
 - 100°C
 - 32°C
 - 60°C
23. Matter changing from a solid to a gas is called:
- Evaporation
 - Sublimation
 - Deposition
 - Melting
24. Juwan can see himself in the silver spoon he's eating with. This is because of silver's
- Luster
 - Conductivity
 - Malleability
 - Texture
25. Copper and other metals are often used in cooking pots and electrical wires. This is because metals
- Are great conductors.
 - Are shiny.
 - Are great insulators.
 - Are silver.
26. All of the following are non-metal EXCEPT:
- Silicon
 - Oxygen
 - Sulphur
 - Neon
27. The properties of a mystery element are listed below:
- very hard
 - Electrical Conductor
 - High melting Point
 - Dull and brittle
- Which of these properties does the substance Graphite contain?
- IV
 - I, II, IV
 - I, II, III, IV
 - I, IV
28. Purple permanganate crystals were accidentally thrown in a glass water and after an hour the water turned pink. This is because _____ took place.
- Brownian Motion
 - Diffusion
 - Osmosis
 - Mixing
29. Which of the following mixtures can be separated by using a separating funnel?
- Salt and Water
 - Milk
 - chalk and water
 - oil and water
30. The symbol for the element Iron is _____.
- Fe
 - I
 - Ag
 - Fl

31. Why do scientists organize things into groups?

- (a) So they can find them in the wild more easily
- (b) So that the organisms are easier to study
- (c) So they can make sense of the variety of rocks on Earth
- (d) So products from living things can be easily found in groceries

32. Which of the following animals is NOT an invertebrate?

- (a) Octopus
- (b) Shrimp
- (c) Spider
- (d) Pelican

33. Which class of animal has skin with fur or hair, feeds their young milk and maintains a constant body temperature?

- (a) Fish
- (b) Birds
- (c) Mammals
- (d) Reptiles

34. A bat is the only mammal that flies. Mammals are _____.

- (a) Invertebrates
- (b) Arthropods
- (c) Arachnids
- (d) Vertebrates

35. The parts of the flower that produces pollen is the _____.

- (a) Ovary
- (b) Petal
- (c) anther
- (d) sepal

SECTION B – STRUCTURED QUESTION

INSTRUCTION: *This section contains 1 question. Answer the question on the Foolscape Sheets provided.* (25 marks)

1. (a) What is meant by ‘the nature of science’? (2 marks)
- (b) Explain, in your own words the meaning of the following words that describe the nature of science.
- (i) Tentative (1 mark)
 - (ii) Amoral (1 mark)
 - (iii) Empirical (1 mark)
 - (iv) Replicable (1 mark)
- (c) Joan, who works with computers made the following statement: “*Science and technology are not related or connected; they have nothing to do with each other. Furthermore, neither has benefitted society!*”
- Discuss the statement that Joan made above, stating whether you agree or disagree and give three valid reasons to support your answer. (4 marks)
- (d) Living things have characteristics which differentiate them from non-living things
- (i) Describe FOUR characteristics that ALL living things possess. (4 marks)
 - (ii) Draw well labelled diagrams of a plant and an animal cell. Your diagrams should clearly show the similarities and differences between the cells (8 marks)
 - (iii) Identify THREE organ systems and state their main function in the human body (3 marks)

Total 25 marks

END OF EXAM