

Section A
[20 marks]

Each section is followed by four choices A, B, C, and D. Choose the correct answer and **shade** the correct answer completely on the answer sheet using a 2B pencil on **page 8**.

1. Diagram 1 shows a pure gold ring.



Diagram 1

Which diagram is correct for the particles that make up the gold ring?

A.



B.



C.



D.



2. Diagram 2 shows the structure of an atom.

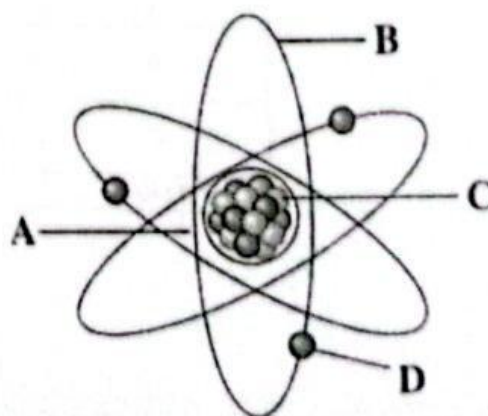


Diagram 2

Which subatomic particles, A, B, C or D, is negatively charged?

3. Diagram 3 shows a periodic table.

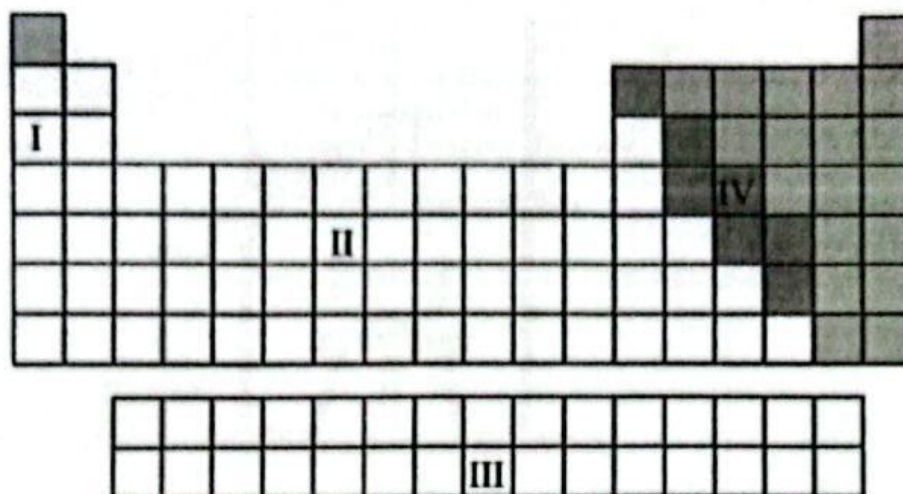


Diagram 3

Which elements consist of metal only?

- A. I and II
- B. III and IV
- C. II and III
- D. I and IV

4. Diagram 4 shows a compound commonly found in kitchens.



Diagram 4

What elements are present in the compound?

- I. Sodium
 - II. Chlorine
 - III. Oxygen
 - IV. Hydrogen
- A. I and II
 - B. III and IV
 - C. II and III
 - D. I and IV

5. Diagram 5 shows the apparatus set up to purify mixture X.

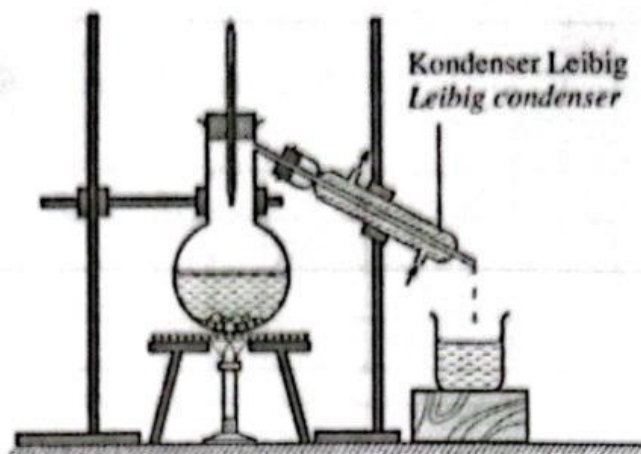


Diagram 5

What is mixture X?

- A. Coffee drink
 - B. Alcohol and water
 - C. Cooking oil
 - D. Food colouring
6. Which of the following subatomic particles carries a negative charge?
- A. Proton
 - B. Neutron
 - C. Electron
 - D. Nucleus
7. Which of the following properties is a characteristic of a non-metal element?
- A. Shiny surface
 - B. Malleable
 - C. Poor conductor of heat and electricity
 - D. High melting point
8. Which method is most suitable to separate a mixture of iron powder and sulphur powder?
- A. Filtration
 - B. Evaporation
 - C. Chromatography
 - D. Using a magnet

9. Which of the following statements is true about a compound?
- A. Consists of only one type of atom.
 - B. Can be separated using physical methods.
 - C. Its formation involves a chemical reaction.
 - D. Its properties are identical to its constituent elements.
10. Which method is used to decompose water into hydrogen and oxygen gas?
- A. Boiling
 - B. Electrolysis
 - C. Filtration
 - D. Distillation
11. Table 11 shows the percentage of gas components in the air.

Gas	Percentage
Oxygen	21
Inert gas	0.97
X	0.03
Y	78

Table 11

What are X and Y?

	X	Y
A.	Helium	Hydrogen
B.	Nitrogen	Carbon dioxide
C.	Carbon dioxide	Nitrogen
D.	Hydrogen	Helium

12. What is the importance of nitrogen gas?

- A. Production of ammonia.
- B. Production of carbonated drinks.
- C. Used to fill the air balloon.
- D. Used in welding and metal cutting.

13. Which process does not involve in a carbon cycle?

- A. Respiration
- B. Combustion
- C. Decomposition
- D. Rusting

14. The following information in Diagram 14 shows the adverse effects of air pollution.

- Corrode concrete and limestone structures.
- Causes soil to be acidic and infertile.
- Can kill aquatic life.

Diagram 14

Which pollutants contribute to air pollution and have adverse effects as in the above information?

- I. Carbon dioxide
- II. Carbon monoxide
- III. Sulphur dioxide
- IV. Nitrogen dioxide

- A. I and II
- B. III and IV
- C. II and III
- D. I and IV

15. Diagram 15 shows three conditions needed for combustion.



Diagram 15

Which of the following is an example of Z?

- A. Water
- B. Glass rod
- C. Carbon dioxide
- D. Matches

16. Which process releases oxygen into the atmosphere to maintain the balance of the oxygen cycle?

- A. Combustion
- B. Respiration
- C. Photosynthesis
- D. Rusting

17. Which of the following gases extinguishes a burning wooden splint and turns lime water cloudy?

- A. Oxygen
- B. Nitrogen
- C. Carbon dioxide
- D. Hydrogen

18. Which substance is most suitable to extinguish a fire caused by electrical equipment?

- A. Water
- B. Carbon dioxide
- C. Wet sand
- D. Wet blanket

19. An increase in the concentration of which gas released from excessive burning of fossil fuels causes the greenhouse effect?

- A. Carbon dioxide
- B. Sulphur dioxide
- C. Nitrogen
- D. Oxygen

20. What is the adverse effect of carbon monoxide gas from vehicle exhaust fumes on human health?

- A. Damages eye lens cells.
- B. Reduces the ability of blood to transport oxygen.
- C. Corrodes the stomach mucus layer.
- D. Causes permanent hearing loss.

Answer sheet for SECTION A:

1. (A) (B) (C) (D)

2. (A) (B) (C) (D)

3. (A) (B) (C) (D)

4. (A) (B) (C) (D)

5. (A) (B) (C) (D)

6. (A) (B) (C) (D)

7. (A) (B) (C) (D)

8. (A) (B) (C) (D)

11. (A) (B) (C) (D)

12. (A) (B) (C) (D)

13. (A) (B) (C) (D)

14. (A) (B) (C) (D)

15. (A) (B) (C) (D)

16. (A) (B) (C) (D)

17. (A) (B) (C) (D)

18. (A) (B) (C) (D)