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.

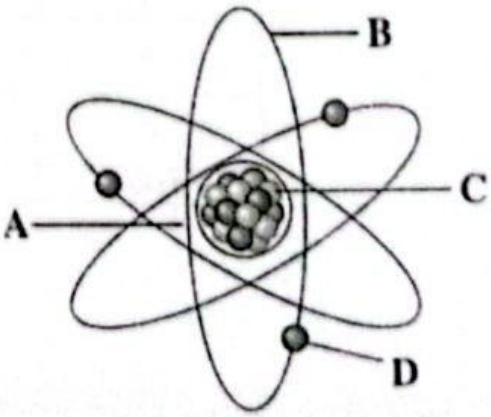

Diagram 2

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

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3. Diagram 3 shows a periodic table.

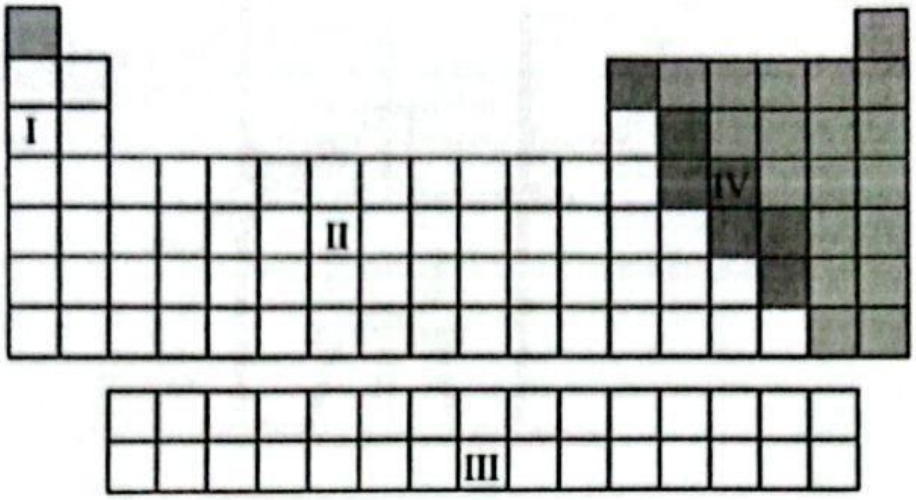

Diagram 3

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

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

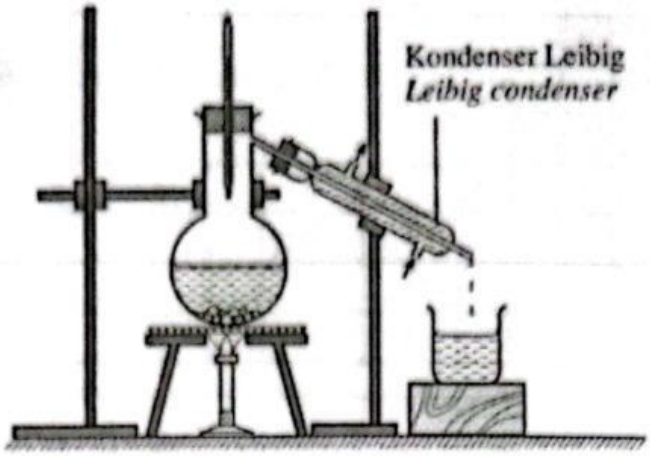

Diagram 5

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

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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

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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 abo 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

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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

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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)

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