

MCQ Examination

<p>Name: _____</p> <p>Class: _____ Section: _____</p> <p>Roll no.: _____</p>	<p>Instructions:</p> <ul style="list-style-type: none">• Read all questions carefully• Mark answers on separate OMR sheet• Use question paper for rough work• Manage time to complete all sections
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SET B

Duration: **30min**

This section contains 10 multiple-choice questions covering various topics in mathematics, including algebra, geometry, and arithmetic. Each question has four possible answers.

3. A rhombus is a quadrilateral with all four sides of equal length. Its opposite sides are parallel, and its opposite angles are equal. The diagonals of a rhombus bisect each other at right angles.
- Consider the properties of the shape described.*
- A. All four angles are equal.
 - B. All four sides are equal.
 - C. Diagonals bisect each other at 90 degrees.
 - D. Opposite angles are equal.

A. Property B
B. Property D
C. Property C
D. Property A

5. Match the mathematical term with its correct definition.

Term	Definition
1. Prime Number	a. A whole number that is not a fraction.
2. Median	b. A number greater than 1 with only two factors: 1 and itself.
3. Integer	c. The middle value in a sorted list of numbers.

A. 1-b, 2-c, 3-a **B.** 1-c, 2-a, 3-b
C. 1-a, 2-b, 3-c **D.** 1-b, 2-a, 3-c

- Statement II:**
In an equilateral triangle, all three sides are of equal length and all three angles are 60 degrees.

A. Only Statement I is correct
B. Both Statement I and Statement II are correct
C. Neither statement is correct
D. Only Statement II is correct

- What is the correct order of these steps?

- A.** $B \rightarrow C \rightarrow A$
B. $C \rightarrow A \rightarrow B$
C. $A \rightarrow B \rightarrow C$
D. $B \rightarrow A \rightarrow C$

10. Read the paragraph about a numerical sequence:
- An arithmetic sequence starts with the number 3. Each subsequent term is found by adding 4 to the previous term. The first few terms are 3, 7, 11, 15, and so on.

A. 35
B. 27
C. 39
D. 31

Science

This section presents 10 multiple-choice questions on topics in biology, chemistry, and physics. Each question has five possible answers.

11. Consider the following stages of photosynthesis:
1. Carbon Dioxide (CO2)
2. Water (H2O)
3. Glucose (C6H12O6)
4. Oxygen (O2)
5. Sunlight

Which of these are the primary outputs of the process?
A. 1 and 2 B. 2 and 4
C. 1 and 5 D. 3 and 5
E. 3 and 4
12. What is the chemical symbol for the element Gold?
A. Ag B. Go
C. Au D. Ge
E. Gd
13. Which of the following elements is a noble gas?
A. Hydrogen (H) B. Neon (Ne)
C. Chlorine (Cl) D. Oxygen (O)
E. Sodium (Na)
14. Evaluate the following statements about the states of matter:

Statement A:
Particles are in fixed positions and vibrate.

Statement B:
Particles are far apart and move randomly and rapidly.

Statement C:
Particles are closely packed but can slide past one another.

Which statement correctly describes the particle arrangement in a liquid?
A. Statement A (Solid) B. Statement B (Gas)
C. Both A and C D. Statement C (Liquid)
E. None of the above
15. Read the paragraph about Newton's Third Law of Motion:

Newton's Third Law of Motion states that for every action, there is an equal and opposite reaction. This means that in every interaction, there is a pair of forces acting on the two interacting objects. The size of the forces is equal, and the direction of the forces is opposite.

Which of the following is the best example of this law?
A. A planet orbiting the sun.
B. A heavy object requiring more force to accelerate than a light one.
C. The recoil of a gun after firing a bullet.
D. A ball rolling to a stop due to friction.
E. An object staying at rest unless a force acts on it.

16. Match the scientific unit with the quantity it measures.

Unit	-	Quantity
1. Newton	-	a. Power
2. Watt	-	b. Pressure
3. Hertz	-	c. Force
4. Pascal	-	d. Frequency

Which is the correct set of matches?
A. 1-b, 2-a, 3-d, 4-c B. 1-c, 2-d, 3-a, 4-b
C. 1-a, 2-c, 3-b, 4-d D. 1-c, 2-a, 3-d, 4-b
E. 1-d, 2-b, 3-c, 4-a
17. The pH scale measures how acidic or basic a substance is.
A substance with a pH of 2 is considered to be...?
A. Strongly acidic B. Neutral
C. Weakly acidic D. Strongly basic
E. Weakly basic
18. The process by which a liquid turns into a gas at the surface of the liquid is called what?
A. Evaporation B. Deposition
C. Melting D. Sublimation
E. Condensation
19. Read the information about the human circulatory system.

The human circulatory system is responsible for transporting oxygen and nutrients to cells and carrying away waste products like carbon dioxide. Arteries carry oxygenated blood away from the heart to the body, while veins carry deoxygenated blood back to the heart. The pulmonary artery is a notable exception, carrying deoxygenated blood to the lungs.

Now consider the following statements.

Assertion (A):
All arteries in the body carry oxygenated blood.

Reasoning (R):
Arteries are defined by carrying blood away from the heart, not by their oxygen content.

Based on the text, which conclusion is correct?
A. Both A and R are false.
B. A is false and R is true.
C. Both A and R are true, and R correctly explains A.
D. A is true and R is false.
E. Both A and R are true, but R does not explain A.
20. What is the powerhouse of the cell, responsible for generating most of the cell's supply of adenosine triphosphate (ATP)?
A. Endoplasmic Reticulum B. Mitochondrion
C. Ribosome D. Golgi Apparatus
E. Nucleus

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