



Part I: Mathematics (50 questions)

Multiple Choice Questions (MCQs)

- What is the value of π (pi)?
- a) 3.14
- b) 2.71
- c) 1.62
- d) 4.20
- What is the result of $5 * 8 + 3$?
- a) 40
- b) 43
- c) 13
- d) 23
- Solve for x: $2x + 5 = 15$.
- a) $x = 5$
- b) $x = 10$
- c) $x = 15$
- d) $x = 20$
- What is the square root of 144?
- a) 12
- b) 14
- c) 10
- d) 16
- What is the next number in the sequence: 2, 4, 6, 8, ...?
- a) 9
- b) 10
- c) 11
- d) 12

Short Answer Questions

- Simplify: $\frac{3}{4} + \frac{1}{6}$.
- Calculate the area of a rectangle with length 8 cm and width 5 cm.



- If a car travels at a speed of 60 km/h for 3 hours, how far does it travel?
- Express 20% as a decimal.
- Solve for y: $2y - 7 = 11$.

Long Answer Questions

- A triangle has sides of lengths 5 cm, 8 cm, and 10 cm. Is it a right triangle? Justify your answer.
- John saves \$20 per week. Write an equation to represent the amount of money he saves in x weeks.
- Compare and contrast prime and composite numbers.
- If a recipe requires $\frac{2}{3}$ cups of flour and you want to make 4 batches, how many cups of flour do you need in total?
- Describe the process of long division and provide an example.

Part II: Science (50 questions)

Multiple Choice Questions (MCQs)

- What is the boiling point of water in Celsius?
- a) 0°C
- b) 100°C
- c) 50°C
- d) 212°C
- Which of the following is a renewable energy source?
- a) Coal
- b) Solar
- c) Natural Gas
- d) Petroleum
- What is the chemical symbol for water?
- a) W
- b) Wa
- c) H_2O
- d) H_2
- What force keeps planets in orbit around the sun?
- a) Gravitational force
- b) Magnetic force



- c) Centrifugal force
- d) Frictional force
- What part of the plant absorbs water and minerals from the soil?
- a) Roots
- b) Stem
- c) Leaves
- d) Flowers

Short Answer Questions

- Define photosynthesis.
- Name the three states of matter and explain their characteristics.
- Describe the process of digestion in the human body.
- What is the function of the nucleus in a cell?
- Explain the difference between an element and a compound.

Long Answer Questions

- Discuss the greenhouse effect and its impact on climate change.
- Describe Newton's laws of motion and provide examples for each.
- Explain the process of mitosis in cell division.
- Differentiate between weather and climate.
- Discuss the importance of biodiversity in ecosystems.