

Instructions:

- This paper contains 10 questions - 5 Science and 5 Mathematics
- Each question carries equal marks
- Choose the correct option for each question
- This is a sample paper, Original paper will contain 25 Maths, 25 Science. Duration: 2 hours

SCIENCE (Questions 1-5)

Question 1: A rocket works on the principle of:

- (A) First law of motion
- (B) Second law of motion
- (C) Third law of motion
- (D) Law of conservation of energy

Answer: (C) Third law of motion

Question 2: Speed of sound is fastest in:

- (A) Solid
- (B) Liquid
- (C) Gas
- (D) Same speed in all media

Answer: (A) Solid

Question 3: Which one of the following is useful in manufacturing non-stick cookware?

- (A) Teflon
- (B) Polythene
- (C) Polystyrene
- (D) Polypropene

Answer: (A) Teflon

Question 4: Which one of the following petroleum product is used in preparing paints?

- (A) Bitumen
- (B) Bituminous
- (C) Paraffin
- (D) Petrol

Answer: (C) Paraffin

Question 5: Mode of transmission of malaria disease is:

- (A) Insect bite
- (B) Air
- (C) Water
- (D) Food

Answer: (A) Insect bite

MATHEMATICS (Questions 6-10)

Question 6: If $a = 64$ and $b = 289$, then the value of $((\sqrt{a} + \sqrt{b})^{1/2} - (\sqrt{b} - \sqrt{a})^{1/2})^{1/2}$ is:

- (A) $2^{1/2}$
- (B) 2
- (C) 4
- (D) -2

Answer: (A) $2^{1/2}$

Question 7: 105 is divided into three parts in such a way that the first part is 5 more than the second part and its ratio with the third part is 3:5. The second part is:

- (A) 30
- (B) 50
- (C) 25
- (D) 35

Answer: (C) 25

Question 8: The least number, which is a perfect square and is divisible by each of the numbers 16, 20 and 24 is:

- (A) 1600
- (B) 3600
- (C) 6400

- (D) 14400

Answer: (B) 3600

Question 9: If $(a/b) = (4/5)$ and $(b/c) = (15/16)$, then $(18c^2 - 7a^2)/(45c^2 + 20a^2)$ is equal to:

- (A) $1/3$
- (B) $2/3$
- (C) $3/4$
- (D) $1/4$

Answer: (D) $1/4$

Question 10: A train running at $(2/7)$ of its own speed reached a place in 22 hours. How much time could be saved if the train would run at its own speed?

- (A) 14 hours
- (B) 7 hours
- (C) 8 hours
- (D) 16 hours

Answer: (C) 8 hours

End of Paper

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Answer Key:

1. (C) | 2. (A) | 3. (A) | 4. (C) | 5. (A) | 6. (A) | 7. (C) | 8. (B) | 9. (D) | 10. (C)