(FOR THE CANDIDATES ADMITTED

 DURING THE ACADEMIC YEAR 2023 ONLY)

23UMS4N3

REG.NO. :

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI
END-OF-SEMESTER EXAMINATIONS : MAY-2025

B.Sc MATHEMATICS   **MAXIMUM MARKS: 50**

SEMESTER: IV   **TIME : 2 HOURS**

PART - IV
QUANTITATIVE APTITUDE II
SECTION – A   (10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.
MULTIPLE CHOICE QUESTIONS.   **(K1)**

1. The sum of ages of 5 children born at the intervals of 3 years each is 50 years. Then the age of the youngest child is

    a) 4 years   b) 8 years   c) 10 years   d) none of these

2. If A can do a piece of work in n days then A's 1 day work is

    a) 1 / n   b) n   c) 1   d) n / 2

3. A bike rider covers a certain distance at 36 kmph. Then the meters he covered in 2 minutes is

    a) 1100   b) 1200   c) 1300   d) 1400

4. The time taken by a train 180 m long running at 72 kmph in crossing an electric pole is

    a) 8 sec   b) 9 sec   c) 18 sec   d) 10 sec

5. If the speed downstream is a kmph and the speed upstream is b kmph then speed in still water is

    a) ½(a+b) kmph   b) ½(a-b) kmph   c) ½(ab) kmph   d) ½(a / b) kmph

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES   **(K2)**

6. The ratio of ages of Meena and Meera is 4: 3 and the sum of their ages is 28 years. Find the ratio of their ages after 8 years ?

7. If A can do a piece of work in 30 days while B alone can do it in 40 days. In how many days can A and B working together do it?

8. If a man running at 15kmph crosses a bridge in 5 minutes, then find the length of the bridge?

9. A train 120 m long crosses a standing man in 15 seconds. Find the speed of the train?

10. A man rows downstream 27 km and upstream 18 km taking 3 hours each time. What is the velocity of the current?

SECTION – B (5 X 8 = 40 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.
(K3), (K4 (Or) K5)

11. a) Sachin was twice as old as Ajay 10 years back. How old is Ajay today if Sachin will be 40 years old 10 years hence?

(OR)

b) The total of ages of A,B and C at present is 90 years. Ten years ago the ratio of their ages was 1:2:3. What is the age of B at present?

12. a) 3 men can complete a piece of work in 6 days. Two days after they started the work, 3 more men joined them. How many days will they take to complete the remaining work.

(OR)

b) A and B can do a piece of work in 72 days. B and C can do it in 120 days. A and C can do it in 90 days. In what time can A alone do it?

13. a) Two trains starting at the same time from two stations 200 km apart and going in opposite directions cross each other at a distance of 110 km from one of the stations. What is the ratio of their speeds?

(OR)

b) A walks at 4 kmph and 4 hours after his start, B cycles after him at 10 kmph. How far from the start does B catch up with A?

14. a) A train 100 metres long takes 6 seconds to cross a man walking at 5 kmph in a direction opposite to that of the train. Find the speed of the train.

(OR)

b) Two trains 200 m and 150 m long are running on parallel rails at the rate of 40 kmph and 45 kmph respectively. In how much time will they cross each other, if they are running in the same direction?

15. a) A man can row 40 km upstream and 55 km downstream in 13 hours. Also, he can row 30 km upstream and 44 km downstream in 10 hours. Find the speed of the man in still water and the speed of the current.

(OR)

b) A man can row at a rate of 5 kmph in still water . If the river is running at 1 kmph, it takes him 75 minutes to row to a place and back. How far is the place?

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