

QP Code : U24A029

Reg. No :

Name :

ST MARY'S COLLEGE (AUTONOMOUS), THRISSUR-20

I SEMESTER B.A/B.Sc /B.Com/BBA/BCA/BSW (FYUGP) DEGREE EXAMINATION,
November 2024

MAT1FM105(2):MATHEMATICS FOR COMPETITIVE
EXAMINATIONS - PART I

2024 Admission Onwards

(Credits: 3)

Time : 1.5 Hours

Maximum Marks : 50

Section A

[Answer *all*. Each question carries 2 Marks] (Ceiling: 16 Marks)

1. What is the next term in the series 7,11,13,17,19,... [BTL3]
2. $353.5 + 2.32 + 43.23 = ?$ [BTL1]
3. Find the square of 34. [BTL2]
4. What will be the duplicate ratio of 2 : 7 ? [BTL1]
5. What will be the mean proportional between 4 and 25 ? [BTL3]
6. 20% of 300 = ? [BTL2]
7. Vandana completes a work in 35 days. What work will she do in 1 day? [BTL4]
8. A train covers a distance of 200 km with a speed of 10 km/h. What time is taken by the train to cover this distance. [BTL4]
9. A train covers 85 m in passing a signal post. What is the length of the train? [BTL5]
10. $\sqrt{\frac{2704}{81}} = \dots ?$ [BTL2]

Section B

[Answer *all*. Each question carries 6 Marks] (Ceiling: 24 Marks)

11. (a) Which one of the fractions is largest among $\frac{2}{3}, \frac{3}{4}, \frac{4}{3}, \frac{5}{4}$. Justify your answer. [BTL2]
(b) Find the HCF of $\frac{36}{51}$ and $3\frac{9}{17}$
12. (a) Which is greater between 5 : 8 and 9 : 14 [BTL1]
(b) Find the average of the following set of scores;
253, 124, 255, 534, 836, 375, 101, 443, 760
13. What will be the selling price of an article, if two successive discounts of 15% and 12% are offered on its marked price of Rs.25500 ? [BTL4]

Turn Over

14. In 55 year, Kim will be 12 times as old as she is right now. What is her current age? [BTL5]
15. A person covers a distance of 12 km, while walking at a speed of 4 km/h. How much [BTL3]
distance he would cover in same time, if he walks at a speed of 6 km/h?

Section C

[Answer **any one**. Each question carries **10 Marks**] (1x10=10 Marks)

16. (a) What is the sum of face value and place value of 7 in the number 3728456? [BTL3]
- (b) Evaluate $43 - [20 \div \{18 - (16 - 12 \div \overline{2 + 4})\}]$
- (c) Solve $\frac{(9.8)^3 - (6.8)^3}{(9.8)^2 + 9.8 \times 6.8 + (6.8)^2}$
17. (a) A table is bought for Rs.1500 and sold at a loss of 6%. Find its selling price. [BTL4]
- (b) Amit takes some loan from Akash for 2 year at the rate of 5% per annum and after 2 year he gave back Rs.6600 to Akash and completed the payment of his loan. Find the interest paid by Amit.
- (c) What sum of money at compound interest will amount to Rs.4499.04 in 3 year, if the rate of interest is 3% for the 1st year, 4% for the 2nd year and 5% for the 3rd year?

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