K25FY4165 Pages: 2 Reg No:.....
Name:.....

First Semester FYUGP Degree (Reg/Sup) Examination November 2025

KU1MDCMAT101 - MATHEMATICS IN REAL LIFE

2024 Admission onwards

Time : 1.5 hours Maximum Marks : 50

Section A

Answer any 6 questions. Each carry 2 marks.

1. Define Loss percent.
2. Define Gain Percent.
3. $3251 + 587 - ? = 3007$.
4. Which is the smallest two-digit prime number?
5. If A can do a piece of work in 3 days, calculate A's one day's work.
6. A car moves at the speed of 80 km/h. Compute the speed of the car in m/s.
7. Calculate the average of first three odd numbers.
8. Express $6\frac{3}{4}$ as rate percent.

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Section B

Answer any 4 questions. Each carry 6 marks.

9. Worker A takes 8 hours to do a job. Worker B takes 10 hours to do the same job. How long should it take both A and B, working together but independently, to do the same job.
10. A is twice as good a workman as B and together they finish a piece of work in 18 days. In how many days will A alone finish the work?
11. A man travelled from his village to post office at the rate of 25 kmph and walked back at the rate of 4 kmph. If the whole journey took 5 hours 48 minutes, determine the distance of the post office from the village.
12. There are two sections A and B of a class, consisting of 36 and 44 students respectively. If the average weight of section A is 40 kg and that of section B is 35 kg, fin the average weight of the whole class.
13. Raman's salary was decreased by 50% and subsequently increased by 50%. Determine whether this resulted in gain or loss.

14. The product of the ages of A and B is 240. If twice the age of B is more than the age of A by 4 years, calculate the age of B.

Section C

Answer any 1 questions. Each carry 14 marks.

15. A garrison of 3300 men had provisions for 32 days, when given at the rate of 850 gm per head. At the end of 7 days, a reinforcement arrives and it is found that the provisions will last for 17 days more, when given at the rate of 825 gm per head. Compute the strength of the reinforcement.

16. (a) Find the unit digit in the product $784 \times 618 \times 917$.
    (b) Find the sum of the first n natural numbers.
    (c) If $2 + 2^2 + 2^3 + \ldots + 2^n = 126$, compute the value of n, using the formula for finding sum of n terms

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