D1BAM2503

Name: .....

Reg. No.: .....

FIRST SEMESTER FYUGP EXAMINATION NOVEMBER 2025

(Regular/Improvement/Supplementary)

MULTI DISCIPLINARY COURSE

AMA1FM105(2): MATHEMATICS FOR COMPETITIVE EXAMINATIONS - PART 1

Time: 1 ½ Hrs. **Maximum Marks: 50**

M: Mark BL: Bloom's Taxonomy Level (1 to 6) CO: Course Outcome

Section A: Answer all questions. Each carries 2 marks.
Ceiling: 16 Marks

No.	Question	M	BL	CO
1.	The sum of the four consecutive even numbers is 284. What would be the smallest number? a) 72 b) 74 c) 68 d) 66	2	5	CO1
2.	What will be the lcm of 15,24,32 and 45? a) 1440 b) 1100 c) 1350 d) 1445	2	2	CO1
3.	The price of the computer is 20000.What will be the price of computer after reduction of 25%? a)18000 b)15000 c)17000 d)19000	2	1	CO1 CO2
4.	A man losses 20% of his money. After spending 25% of the remainder he has 480 left. What is the amount of money that he originally had? a) 600 b) 720 c) 800 d) 840	2	3	CO2
5.	A toy is bought for 150 and sold at a gain of 8%. Find the selling price? a) 160 b) 172 c) 182 d) 162	2	1	CO2
6.	Ravish lost 20% by selling a radio set for 3072.What percent will he gain by selling it for 4080? a) 4.45 b) 6 c) 6.35 d) 6.25	2	3	CO2
7.	If Karan purchases 10 oranges for 25 and sells 9 oranges for 25. Then find the gain percentage? a)$11\frac{1}{9}$ b)$13\frac{7}{9}$ c)14 d)$13\frac{1}{8}$	2	5	CO2
8.	Nikunj sold a machine to Sonia at a profit of 30%, Sonia sold his machine to Anu at a loss of 20%. If Nikunj paid 5000 for this machine, find the cost price of machine for Anu? a) 5100 b) 5150 c) 5200 d) 5250	2	6	CO2
9.	Simple interest for the sum of 1500 is 50 in 4 years and 80 in 8 years. Find the rate of simple interest? a) .085% b) .5% c) .10% d) .25%	2	5	CO2
10.	If the speed of a boat in still water is 8 km/h and the rate of stream is 4 km/h, then find upstream speed of the boat. a) 4 Km/h b) 5 Km/h c) 6 Km/h d) 8 Km/h	2	1	CO1 CO2

(PTO)

Section B: Answer all questions. Each carries 6 marks.
Ceiling: 24 Marks

No.	Question	M	BL	CO
11.	i) When a number divided by 5 leaves 3 as the remainder, what will be the remainder when the square of this is divided by by 5? a)3 b) 4 c) 5 d) 0 ii) In a question on division with zero remainder, a candidate took 12 as divisor instead of 21 .The quotient obtained by him was 35.Find the correct quotient . a) 10 b) 12 c) 20 d) 15	6	1	CO1
12.	Calculate the LCM of $\frac{72}{250}, \frac{126}{75} and \frac{162}{165}$	6	5	CO2
13.	i) If the income of Ravi is 20% more than that of Ram.,then income of Ram is how much percent less than that of Ravi? a)$\frac{50}{3}$ b)$\frac{32}{17}$ c)$\frac{63}{29}$ d)$\frac{72}{13}$ ii) If in the examination ,the marks obtained by Preethi is 20% less than that of Vandana ,Then the marks obtained by Vandana is how much percent more than marks obtained by Preethi? a)15 b) 20 c) 25 d) 27	6	1	CO2
14.	A certain sum at a certain rate of simple interest amounts to 1125 in 4 yr and 1200 in 7 yr. Find the sum and rate of interest.	6	3	CO2
15.	At what time between 3 o clock and 4 o clock, will the hands of a clock be in opposite directions. (a) $48\frac{1}{11}$ min past 3 (b) $49\frac{1}{11}$ min past 3 (c) $50\frac{1}{11}$ min past 3 (d) $52\frac{1}{11}$ min past 1	6	5	CO1 CO2 CO3

Section C: Answer any one question. Each carries 10 marks. (1 x 10 = 10 Marks)

No.	Question	M	BL	CO
16.	(i) Pinky bought 20 books at the rate of Rs. 10 each, 45 pens at the rate of Rs. 5 each and 15 pencils at the rate of Rs. 3 each. Calculate the average price of all the stationary goods. (a) 4.456 (b) 5.875 (c) 5.433 (d) 2.564 (ii) If $x = \sqrt{3} + \sqrt{2}$, then the value of $(x + \frac{1}{x})$ is (a) 2 (b) 3 (c) $2\sqrt{2}$ (d) $2\sqrt{3}$ (iii) Find the value of $\frac{a+b}{a-b}$, if $\frac{a}{b} = \frac{5}{3}$ (a) $\frac{1}{4}$ (b) $\frac{4}{1}$ (c) $\frac{3}{4}$ (d) $\frac{4}{3}$	10	4	CO1 CO2 CO3

17.	(i) A person covers a certain distance with a speed of 18 km/h in 8 min. If he wants to cover the same distance in 6 min, what should be his speed . (a) 20 km/h (b) 22 km/h (c) 24 Km/h (d) 30 Km/h (ii) A train passes a standing man in 6 s and a 210 m long platform in 16 s. Find the length and speed of the train. (a) 126 m, 21 m/s (b) 127 m, 21 m/s (c) 128 m, 22 m/s (d) 127 m, 22 m/s	10	4	CO1 CO2 CO3