

FIRST SEMESTER FYUGP EXAMINATION NOVEMBER 2024**MDC****MAT1FM105(2) MATHEMATICS FOR COMPETITIVE EXAMINATIONS - PART 1****Time : 1 Hrs 30 Mins****Maximum Marks : 50**

BL : Bloom's Taxonomy Level (1 to 6)

CO : Course Outcome

Section A		Ceiling Marks : 16		
Answer all questions. Each carries 2 marks.				
No.	Question	M	BL	CO
1.	Find the difference of place value and face value of 4 in 324372 a)3996 b)3998 c)3398 d)3396	2	2	CO1
2.	Which of the following numbers are always divides the difference between the squares of two consecutive odd integers? a)7 b)3 c)8 d)6	2	3	CO1
3.	A number is divided by 56 gives 29 as remainder .If the same number is divided by 8 , the remainder will be a)4 b)5 c)6 d)7	2	5	CO1 CO2
4.	Find the wrong term 7,9,16,25,41,68,107,173 a)9 b)41 c)68 d)107	2	6	CO1
5.	Find out the average of 308, 125, 45, 120, 102 (a) 130 (b) 150 (c)135 (d) 140	2	1	CO1 CO2
6.	The average weight of 3 women is increased by 4 kg, when one of them whose weight is 100 kg, is replaced by another woman. What is the weight of the new woman. (a) 100 Kg (b) 110 kg (c) 111 Kg (d) 112 Kg	2	5	CO1 CO2 CO3
7.	A table is bought for 1500 and sold at a loss of 6%.Find the selling price? a)1014 b)1140 c)1410 d)1104	2	2	CO2
8.	Amit takes some loan from Akash for 2 yr at the rate of 5% per annum and after 2 yr gave back 6600 rupees to Akash and completed his loan.Find the interest paid by Amit? a)500 b)550 c)600 d)650	2	6	CO2
9.	Convert 360 km/h into m/s. (a) 70 m/s (b) 80 m/s (c) 90m/s (d) 100 m/s	2	3	CO1 CO2
10.	A man can row with a speed of 6 km/h in still water. What will be his speed with the stream, if the speed of stream is 2 km/h. (a) 8 Km/h (b) 10 Km/h (c) 12 Km/h (d) 14 Km/h	2	2	CO1 CO2 CO3

Section B

Ceiling Marks : 24

Answer all questions. Each question carries 6 marks.

No.	Question	M	BL	CO
11.	Two numbers are in the ratio of 3 : 5. If 9 is subtracted from each, the ratio becomes 12 : 23. Find the numbers. (a) 34, 56 (b) 33, 55 (c) 36, 56 (d) 34, 55	6	5	CO1 CO2 CO3
12.	i) If a man sold two radios for 2000 each. On one he gains 16% and on another he loses 16%. Find his gain or loss percentage in the whole transaction? a) 2.26 b) 2.52 c) 2.56 d) 2.65 ii) If the cost price of 18 articles is equal to the selling price of 18 articles, find the profit percentage? a) $11\frac{1}{9}$ b) $11\frac{1}{7}$ c) 12 d) 25	6	3	CO2
13.	Find the compound interest on 2000 at 15% per annum for 2 yr 4 months compounded annually? a) 712.36 b) 777.25 c) 748.89 d) 789.89	6	5	CO2
14.	Two trains of lengths 80 m and 90 m are moving in opposite directions at 10 m/s and 7 m/s, respectively. Find the time taken by the trains to cross each other. (a) 12 s (b) 14s (c) 9 s (d) 10 s	6	1	CO1 CO2 CO3
15.	Ramesh rows in still water with a speed of 4.5 km/h to go to a certain place and to come back. Find his average speed for the whole journey, if the river is flowing with a speed of 1.5 km/h. (a) 3 Km/h (b) 4 Km/h (c) 5 Km/h (d) 6 Km/h	6	2	CO1 CO2 CO3

Section C

Answer any 1 question. Each carries 10 marks. (1X10=10 Marks)

No.	Question	M	BL	CO
16.	i) Find the value of $\sqrt{2\sqrt{2\sqrt{2\sqrt{2\sqrt{2}}}}}$ a) $2^{\frac{31}{32}}$ b) 2 c) ∞ d) $2^{\frac{32}{31}}$ ii) $\sqrt{2\sqrt{2\sqrt{2\sqrt{2\sqrt{2}}}}}$ a) $2^{\frac{31}{32}}$ b) 2 c) ∞ d) $2^{\frac{32}{31}}$ iii) $\sqrt{12 + \sqrt{12 + \sqrt{12 + \sqrt{12 + \sqrt{12}}}}}$ a) 4 b) 2 c) 6 d) 3	10	3	CO1

17.	<p>i)30% of a three digit number is 190.8 .What will be the 125% of that number</p> <p>a)759 b)785 c)795 d)779</p> <p>ii)The monthly income of a person is 5000 .If his income is increased by 30 % ,then what will be his new monthly income ?</p> <p>a)700 b)5500 c)4500 d)6500</p> <p>iii)Rajan sold his article for 6000 rupees at a loss of 25%.Find the cost price?</p> <p>a)7500 b)7200 c)8000 d)8500</p>	10	4	CO2
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