

Reg. No.:



W8048

Name:

University of Kerala

First Semester FYUGP Degree Examination, December 2025

Multi-Disciplinary course

MATHEMATICS

UK1MDCMAT100 - Numerical Ability - I

Academic Level: 100-199

2024-Admission

Time: 1 Hour 30 Minutes(90 Mins.)

Max. Marks: 42

**Part A. 6 Marks.Time:6 Minutes.(Cognitive Level:Remember(RE)/Understand(UN)) Objective Type. 1 Mark
Each.Answer all questions**

Qn No.	Question	CL	CO
1	The ratio of two numbers is 3 : 5. If their sum is 40, find the larger number.	RE	2
2	A train travels 60 km in 1 hour 15 minutes. What is its speed in km/hr?	RE	1
3	What is the average of odd numbers from 1 to 40?	UN	2
4	The speed of a boat in still water is 12 km/hr. It covers 28 km upstream in 3 hours 30 minutes. Find the speed of the stream?	UN	1
5	A can do a piece of work in 24 days. B can do it in 48 days. In how many days can both A and B together complete the work?	UN	1
6	Find the HCF of 72 and 120.	UN	2

Part B.8 Marks.Time:24 Minutes.(Cognitive Level:Understand(UN)/Apply(AP))Short Answer. 2 marks each.Answer all questions

Qn No.	Question	CL	CO
7	The sum of two numbers is 40 and their difference is 4. Find the ratio of the numbers	UN	2
8	The mean daily profit made by a shop in a month of 30 days was Rs.2700. If the mean profit for the first 10 days was Rs.2500 , then what is the mean profit for the remaining days?	UN	3
9	Mohan buys a watch for ₹350 sells it for ₹392. Calculate percentage of Profit.	AP	3
10	L.C.M. and H.C.F. of two numbers x and y are 3 and 105, respectively. If $x + y = 36$, find the value of $\frac{1}{x} + \frac{1}{y}$	AP	2

Qn No.	Question	CL	CO
11	A) a) A person travels 120 km at a speed of 40 km/hr and returns at a speed of 60 km/hr. Find his average speed for the entire journey. b) A boat takes 6 hours to travel 30 km upstream and 2 hours to travel the same distance downstream. Find the speed of the boat in still water and the speed of the stream. OR B) The population of a town increases 5% annually: If its present population is 84000, what will it be in 2 years time?	AP	3, 1
12	A) A and B can do a piece of work in 12 days; B and C in 16 days; C and A in 24 days. In how many days can C finish the work? OR B) a) A shopkeeper buys 500 pens at ₹6 each. 40 pens are found defective and cannot be sold. He sells the remaining pens at ₹8 each. Calculate his profit percentage. b) A mixture contains milk and water in the ratio 5 : 2. If 28 litres of water is added, the ratio becomes 5 : 4. Find the quantity of milk in the original mixture.	AN	1, 2
13	A) The annual income and expenditure of a man and his wife are in the ratio 5:3 and 3:1 respectively. If they decide to save equally and find a balance of 4000 at the end of the year. Find their incomes. OR B) Nikita starts her journey from Delhi to Bhopal and simultaneously Nishita starts from Bhopal to Delhi. After crossing each other, they finish their remaining journey in $5\frac{4}{9}$ hours and 9 hours, respectively. What is Nishita's speed if Nikita's speed is 36 Km/h?	EV	3, 3
14	A) Three glasses of size 3 litre, 4 litre and 5 litre contain mixture of milk and water in the ratio 2:3, 3:7 and 4:11 respectively. The contents of all the three glasses are poured into a single vessel. Estimate the ratio of milk to water in the resulting mixture? OR B) A man rows 40 km downstream and returns in a total time of 15 hours. If the speed of the boat in still water is thrice the speed of the stream, then find the speed of the stream?	CR	4, 2

Qn No.	Question	CL	CO