



U7719

Reg. No.:

Name:.....



University of Kerala

First Semester Degree Examination, November 2024

Four Year Under Graduate Programme

Multi Disciplinary Course

Mathematics

UK1MDCMAT100 Numerical Ability - I

Academic Level: 100-199

Time : 1½ Hours

Max. Marks : 42

Part A.

Answer All Questions Objective Type. 1MarkEach.

(Cognitive Level: Remember/Understand)

6Marks.Time: 6Minutes

Qn. No.	Question	Cognitive Level	Course Outcome (CO)
1.	Define average.	Remember	CO2
2.	Find the LCM of 28 and 32.	Remember	CO2
3.	What is partnership?	Remember	CO2
4.	The cost price of a shirt is Rs.200 and selling price is Rs.250. Calculate the % of profit?	Understand	CO3
5.	15 men can do a piece of work in 20 days. In how many days can 12 men complete the same work?	Understand	CO1
6.	Two pipes A and B can fill a tank in 15 minutes and 30 minutes respectively. If both the pipes are opened simultaneously, find the time taken to fill the tank?	Understand	CO1

Part B.

Answer All Questions Short Answer.2MarksEach.

(CognitiveLevel:Understand/Apply)

8 Marks.Time: 24 Minutes

Qn. No.	Question	Cognitive Level	Course Outcome (CO)
7.	Find the average of first 81 natural numbers.	Understand	CO2
8.	Find the mean proportional between 48 and 12.	Understand	CO4
9.	A, B and C together can complete a piece work 36 days.If A and B together can do it in 60 days, in how many days can C alone complete the work?	Apply	CO1
10.	A person completes his journey in 14 hours. He covers half the distance at 60 km/h and the rest at 45 km/h. Find the length of the journey?	Apply	CO1

Part C.

Answer all 4 questions, choosing among options within each question.

Long Answer. 7 Marks Each.

(Cognitive Level: Apply/Analyse /Evaluate/ Create)

28 Marks. Time: 60 Minutes

Qn. No.	Question	Cognitive Level	Course Outcome (CO)
11.	<p>A)(i) The average marks obtained by 40 students of a class is 86. If the 5 highest marks are removed, the average reduces by one mark. Find the average marks of the top 5 students.</p> <p>(ii) Find the H.C.F of 60 and 90.</p> <p>OR</p> <p>B)(i) A is 20% of C and B is 25%. C, what percentage is A of B.</p> <p>(ii) The population of a town increases 5% annually. If its present population is 84,0000. What will it be in 2 years time?</p>	Understand	CO3
12.	<p>A) The incomes of Ram and Mohan are in the ratio 7:2 and their expenditures are in the ratio 4:1. If each saves Rs.1000, find their expenditures ?</p> <p>OR</p> <p>B) A, B and C invested Rs.20,000, Rs.50,000 and Rs.40,000 in a business. The net profit for the year was Rs.12,100. This was divided in proportion to investments. Find out the amount of profit each partner has earned.</p>	Understand	CO4
13.	<p>A) A and B can do a piece of work in 12 days, B and C in 15 days, C and A in 20 days. How long would each of them would take separately to complete the same work.</p> <p>OR</p> <p>B) Two pipes A and B can fill a tank with water in 30 minutes and 45 minutes respectively. The water pipe C can empty the tank in 36 minutes. First A and B are opened. After 12 minutes C is opened. Find the total time (in minutes) to fill the tank?</p>	Apply	CO1
14.	<p>A) (i) A boy goes to school at a speed of 5 km/h and returns at a speed of 6 km/h. If he takes 5 hours 30 minutes in going and coming back, what is the distance between his house and school?</p> <p>(ii) A man rows upstream 54 km and downstream 72 km taking 9 hours each time. Find the speed of the boat and the current?</p> <p>OR</p> <p>B)(i) A train running at a speed of 90 km/h passes a pole on the platform in 20 sec. Find the length of the train in metres.</p> <p>(ii) Sugar at Rs.15 per kg is mixed with sugar at Rs.20 per kg in the ratio 2:3. Find the per kg price of the mixture.</p>	Apply	CO1