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MASTER OF BUSINESS ADMINISTRATION (M.B.A.)
EXAMINATION: DECEMBER - 2024
SEMESTER - I
Sub.: Statistical & Quantitative Methods (MBA104)

Date : 16/12/2024**Total Marks : 60****Time: 2.00pm to 4.30pm**

Instructions 1) All questions are compulsory.
 : 2) Figures to the right indicate full marks.

Q. 1. Write Short notes on (Any Three) (15)

1. Probability
2. Composite Functions
3. LPP
4. Statistical Analysis
5. Graphical Presentation

Q. 2. Answer in detail (Any One) (10)

1. The following is the age distribution of life insurance policy holders whose mean age is 23.6 years . Find the missing frequencies.

Age	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50
No of persons	7	12	?	13	3

2. The ratio of the two friends monthly salary is 3:5. The new ratio would be 13:21 if each person's monthly salary increased by 200 rupees. Determine their starting salary.

Q. 3. Answer in detail (Any One) (10)

1. A, B & C are in business. A sold a car to B with 15% profit . B sold that car to C with 5% profit for Rs. 158000. Find the price at which A has purchased the car.
2. A problem in Mathematics is given to three students Rama,

Govinda and Seeta whose chances of solving it with probability — —
 (1/2) , (1/3) & (1/4) respectively .

Find the probability that the problem was solved independently .

Q. 4. Answer in detail (Any One) (10)

1. Let $g(x) = \left(\frac{3x}{x-3} \right)$ and $f(x) = \left(\frac{x}{x-5} \right)$ then find $g \circ f$, $f \circ g$ and $g \circ g$.
2. Consider about a chocolate manufacturer that only makes A and B varieties of chocolate. Only Milk and Chocolate are needed for both chocolates. The following quantities are needed to produce each unit of A and B: A requires 1 unit of milk and 3 units of chocolate for every unit of A. 1 unit of Milk and 2 units of Chocolate are needed for every unit of B. There are a total of 12 units of chocolate and 5 units of milk in the company kitchen. The corporation earns a profit of for each sale. 6 rupees per unit A sold B sold units cost Rs 5. The business now wants to increase its earnings. How many units of A should it make, and how many of B?

Q. 5. Case Study**(15)**

- MBA students collected certain amounts for the Covid fund. The amount is in Rs. prepared a grouped frequency distribution table. Estimate means, mode & median.

57	89	62	115	200	150	130	140	167	212
117	69	84	189	207	187	108	95	142	182
202	101	88	123	132	205	195	66	74	190
210	183	174	165	156	217	59	94	118	181
127	172	169	207	135	145	190	250	235	159

Questions:

1. Prepare Group Frequency distribution table.
 2. Estimate Mean, Mode & Median.
 3. Draw Histogram & Frequency Polygon.
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