0601N1481   Candidate's Seat No :_____

MBA (DM/PP/EM/BEPF) Sem.-1 Examination
EPF/PPM/EM/DM-102
QA
January-2024

Time : 2-30 Hours]

[Max. Marks : 70

Q.1   Perform One-way ANOVA for the following data: (14)

M	C	Q
10	18	25
21	17	28
23	17	22
16	25	28
20	15	32

{F (2,12) =6.93}

Q.2   In a random sample of 1000 persons from Delhi, 500 are found to be consumer of rice. In   (14) another random sample from Mumbai, 650 out of 1200 are found to be consumers of rice. Do these data reveal a significant difference between these two cities so far as the proportion of rice consumers at 5% level of significance.

Or

Q.2   A group of 10 children were treated to find out how many digits they could repeat from   (14) memory after hearing them once. They were given practice of the test during the next week and then re-tested. Is the difference between the performance of the children at the two-set significant?

Child	1	2	3	4	5	6	7	8	9	10
Before practice	6	5	4	7	8	6	7	5	6	8
After practice	7	7	6	7	9	6	8	6	6	10

{t (0.05, 9) = 2.262}

Q.3   The number of failures occurring in a machine of a certain type in a year has a Poisson   (14) distribution with mean 0.4. In a factory there are ten of these machines. What is
   (a) the expected total number of failures in the factory in a year?
   (b) the probability that there are fewer than two failures in the factory in a year?

Or

Q.3   What is variance? Explain the measures of variability and measures of central tendency in   (14) detail with illustrations.

Q.4   Determine the mean, median, mode, Q3, D7, P40 for the following data: (14)
   14.3, 14.7, 13.9, 15.9, 10.5, 17.7, 14.1, 15.1, 14.4, 10.0, 13.9, 15.3, 14.7, 12.2, 18.5

Or

Q.4   Obtain Karl Person's correlation coefficient from the following data: (14)

Age of Husband	72	71	66	67	68	70	69
Age of Wife	73	71	64	67	70	68	63

Q.5   The following matrix gives the payoff of the different strategies S1, S2, S3, S4 against the   (14) different conditions N1, N2, N3, N4:

	N1	N2	N3	N4
S1	1000	1500	750	0
S2	250	2000	3750	3000
S3	-500	1250	3000	4750
S4	-1250	500	2250	4000

Find the optimal decision using:
A) Maximin B) Maximax C) Laplace criterion D) Minimax regret Criterion