JP – 690

I Semester M.B.A. (Day/Evening) Degree Examination, July 2023
(CBCS Scheme) (2021 – 2022 and Onwards) (Freshers)
MANAGEMENT
Paper – 1.4 : Statistics for Management

Time : 3 Hours

Max. Marks : 70

SECTION – A

Answer **any five** questions. **Each** question carries **five marks.**   **(5×5=25)**

1. What is meant by measures of central dispersion ? How are they helpful in managerial decision making ?

2. By means of the coefficient of variation, determine which of the following judges has been more consistent in awarding marks :

Subjects	I	II	III	IV	V
Judge A	15	20	70	80	25
Judge B	40	50	60	45	65

3. Find the straight line trend by means of the method of least squares and forecast the production figures for the oncoming two years. A graph is not necessary.

Year	2015	2016	2017	2018	2019	2020	2021	2022
Production in 00'000 Rs.	32	40	72	80	48	56	88	72

4. The mean circumference required of shafts manufactured in a Company is 9 cms., with a deviation of three cms. The number of units manufactured per day is 120 shafts.

   a) How many shafts may have a circumference that is greater than thirteen inches per day ?

   b) How many shafts may have a circumference less than seven cms per day ?

5. What is meant by the Hypothesis ? Which is the type of Hypothesis that is required to be set up first ? Explain why ?

P.T.O.

6. Using the Chi Square test for the following data, determine whether the medicine administered to prevent a certain disease in poultry have been useful or not. You may use a five per cent level of significance.

Details	Poultry that fell ill	Poultry that did not fall ill
Poultry Administered the medicine	234	256
Poultry not Administered the medicine	345	365

7. Statistical tests are useful in business decision making. Using suitable examples, explain how these tests are used in real life business situations.

SECTION – B

Answer **any three** questions. **Each** question carries **ten** marks. **(3×10=30)**

8. Find the consumer price index using the following data by means of the family budget method and the aggregate expenditure method :

Commodity	A	B	C	D	E
p_0	12	14	16	18	20
p_1	21	23	25	22	24
q_0	20	22	24	25	27
q_1	25	26	28	27	29

9. A box contains coins numbered from one to fifty five. If a coin is picked at random what is the probability that it is :

a) A multiple of 5 or 7 ?

b) A multiple of 4 or 6 ?

c) A multiple of 7 or 12 ?

d) A multiple of 8 or 11 ?

10. Find the two regression equations from the given data. Find the value of Y when X = 25 and 45, and the value of X when Y = 22 and 43.

X	24	27	28	32	36	38	46	49
Y	31	34	37	39	41	43	48	55

11. Using ANOVA, check whether there is any difference in the cricket score of players in different teams of five cities from the given data :

Details	Team A	Team B	Team C	Team D
City One	20	15	30	40
City Two	30	25	40	50
City Three	25	30	20	45
City Four	35	20	25	55
City Five	40	10	35	60

SECTION – C

Case study : This is a **compulsory** question.   (1×15=15)

12. Find the correlation coefficient for the given data and interpret the meaning and significance of the correlation by finding the probable error.

X	35	37	43	44	47	48	51	54	64
Y	40	49	52	54	57	62	65	67	76

Give your inference for the conclusions that you have made.

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