PJ – 672

I Semester M.B.A. Degree Examination, Jan./Feb. 2019
(CBCS Scheme)
2014-15 and Onwards
Paper – 1.4 : STATISTICS FOR MANAGEMENT

Time : 3 Hours Max. Marks : 70

Instruction : *Calculators and Tables are* ***allowed.***

SECTION – A

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

1. What is meant by one tailed and two tailed tests ? Illustrate and explain.

2. What is meant by asymmetric distribution ? Explain the types with suitable illustrations.

3. A certain medicine was given to a village population to prevent mosquito related diseases. Use the Chi-square test and a 5 percent level of significance to determine whether the medicine was effective or not.

	Took ill	**Did not take ill**	**Total**
Took the Medicine	380	360	740
Did not take the Medicine	420	540	960
	800	900	1700

4. Find the linear trend through the method of least squares and forecast the sales for the next two years. A graph is not necessary.

Year	2013	2014	2015	2016	2017	2018
Sales in 00'000 Rs.	45	56	60	64	75	80

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5. An investor wishes to buy shares from between the two companies given below. The market value of the shares of these two companies over ten days is given below. If the investor is looking for consistency in the shares he buys, use the coefficient of variation and advise him on which company shares he should buy.

	Day One	Day Two	Day Three	Day Four	Day Five	Day Six	Day Seven	Day Eight	Day Nine	Day Ten
Company Uno	110	190	175	185	105	115	190	170	180	120
Company Dno	145	155	150	160	155	165	160	150	140	150

6. What is meant by normal distribution ? Using illustrations, explain the above concept and how you will determine the entire area within the normal distribution curve. Also demonstrate how you will find the area to the right of Z = 0.16 with an illustration.

7. What are non parametric tests ? Briefly explain some non parametric tests and their advantages.

SECTION – B

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

8. From the data given below, you are required to :
   a) Calculate the correlation coefficient
   b) Find the probable error and discuss the significance of correlation
   c) Find the two regression equations.

Sales	42	44	50	54	60	70
Purchases	26	29	35	36	44	50

9. Three varieties of ore was examined by four Geologists and their sulphur content was found as below :

Ore Variety	Geologist One	Geologist Two	Geologist Three	Geologist Four
A	9	6	6	7
B	8	7	8	8
C	3	7	6	5

Use ANOVA with a 5 percent level of significance to determine whether there is any significant variation in the opinion of the Geologists.

10. What is the importance of a Hypothesis ? How is it set up ? What are the other factors involved in testing a hypothesis statistically ? Use illustrations in your answer.

11. What is meant by sampling ? Discuss the various methods of sampling.

SECTION – C
(Compulsory)

12. Case Study. **(1×15=15)**

Calculate the index numbers of price by all five methods and prove that the Fischer's index number satisfies the factor reversal test and the time reversal test.

Commodity	P_0	P_1	Q_0	Q_1
A	13	14	10	12
B	16	17	13	15
C	12	14	14	16
D	17	19	18	19
E	18	20	19	20