Roll No. .....

MMSD-14 **13561**

BUSINESS STATISTICS

Paper—CP-l02

Time Allowed **:** 3 Hours] [Maximum Marks **:** 70

Note **:** Attempt any eight questions from Part A of 5 marks each and three questions of 10 marks each from Part B.

PART-A

1. Explain the use of probability distributions in Business decision making.
2. Describe Addition Probability theorem by giving example,
3. Explain Baye's theorem with example.
4. What are sampling errors and non-sampling errors?
5. Explain meaning and characteristics of sampling distribution of sample mean.
6. Show the difference between Point estimation and Interval estimation of Population mean.
7. Write a note on Kruskal-Wallis test.
8. Write down properties and applications of T-Test and F-Test.
9. What are the uses of SPSS software in Data analysis?
10, Explain the purpose and logic of constructing Quality Control Charts.

PART-B

11. Explain probability sampling methods and non- probability sampling methods.
12. Suppose the waist measurements W of 800 Girls are normally distributed with mean 66 ems. and standard deviation 5 cms. Find the numer N of Girls with waists:
    (a) Between 65 and 70 cms
    (b) Greater than or equal to 72 cms.

13. A problem in Statistics is given to two Students A and B. The odds in Favour of A solving the problem are 6 to 9 against B solving the problem are 12 to 10. If both A and B attempt, find the probability of the problem being solved.

14. Two Researchers adopted different sampling techniques while investigating the same groop of Students to find the number of students falling in different intelligence levels. The results are as follows:

Researcher		No. of Students in each level				
		Below average	Average	Above average	Genuine	Total
X	:	86	60	44	10	200
Y	:	40	33	25	2	100
Total		126	93	69	12	300

Would you say that the sampling techniques adopted by the two Researchers are significantly different? (Given 5% values of X2 for 3 d.fr and 4 d.f. are 7.82 and 9.49 respectively).

15. An inspection of 10 samples of size 400 each from 10 lots revealed the following number of defective units:

17, 15, 14, 26, 9, 4, 19, 12, 9, 15

Calculate control limits for the numer of defective units. Plot the control limits and the observations and state whether the process is under control or not.