E – 5176

Reg. No. : ..... (Pages : 3)

Name : .....

ST. SAVIO'S COLLEGE LIBRARY THIRUVANANTHAPURAM

Second Semester M.Com. Degree Examination, October 2018
Paper – III : CO 223 : QUANTITATIVE TECHNIQUES
(2014 Admission Onwards)

Time : 3 Hours Max. Marks : 70

SECTION – A

Answer the following questions in **two** or **three** sentences. **Each** question carries **2** marks. **(2×10=20 Marks)**

1. What is a standard normal distribution ?
2. Distinguish between Point estimate and Interval estimate
3. Explain the term ANOVA.
4. What is standard error ?
5. Write a note on Run test.
6. What is Statistical Quality Control ?
7. Explain Mann-Whitney U Test.
8. What is a control chart ?
9. What do you mean by Student's T Distribution ?
10. Write a brief note on SPSS.

SECTION – B

Answer **any five** of the following questions. **(5×5=25 Marks)**

11. Discuss the various types of quality control to which the statistical techniques are applied.

12. The monthly income of 1,000 employees are normally distributed around a mean of Rs. 2,500 with a standard deviation of Rs. 250. Find the number of employees whose monthly income would be :
    a) between 2,000 and 3,000
    b) less than 2,000
    c) more than 3,000

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13. From a sample of 900 students, the standard deviation of height was claculated to be 5 cms. From this, can we conclude with almost certainty (99.73% level) that the standard deviation of population would be 4 cms ?

14. A certain stimulus administered to each of the 12 patients resulted in the following increase of blood pressure 5, 2, 8, –1, 3, 0, –2, 1, 5, 0, 4, 6. Can it be concluded that the stimulus will, in general be accompanied by an increase in blood pressure ?

15. What is a normal distribution ? Briefly explain the properties of normal distribution ?

16. In a sample of 400 items from a consignment, 40 were considered to be defective. Estimate the percentage of defective items in the whole consignment and assign the limits within which the percentage will probably lie.

17. In a biscuit factory, quality control is exercised with the help of mean chart. 10 samples of 5 items each were taken at random and the total of their means and standard deviations were arrived at 150 and 9 respectively.

    Construct the mean chart from the above particulars, given that A_1=1.596

18. Explain the various statistical tools used in SPSS.

SECTION – C

Answer **any two** of the following questions. **(2×15=30 Marks)**

19. What are non parametric tests ? Explain the different types of non parametric tests used in testing hypothesis.

20. The following table gives the yield of three varieties.

Varieties	**Yields**				
1	30	27	42		
2	51	47	37	48	42
3	44	35	41	36	

Perform an analysis of variance on this data.

21. From the adult population of four large cities, random samples were selected and the number of married and unmarried men was recorded.

	Cities				
	A	B	C	D	Total
Married	137	164	152	147	600
Single	32	57	56	35	180
Total	169	221	208	182	780

Is there significant variation among the cities in the tendency of men to marry ?

22. The weights of a sample of 7 goats taking peepul leaves were :

17, 15, 20, 18, 14, 16 and 19 kg.

The weights of another sample of 9 goats taking pomegranate leaves were :

18, 16, 21, 19, 15, 19, 22, 21 and 20 kg

From these data, test the hypothesis at 1% significance level that pomegranate leaves are better than peepul leaves in improving the weights of goats.