



B.Tech III Semester Supplementary Examinations, July 2022
STATISTICAL METHODS

(Common to CSE (AI & ML) & CSE (DS))

Maximum Marks: 70

Date: 21.07.2022 Duration: 3 hours

- Note:
1. This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

NOTE: Allowed the Statistical Tables.

Part-A

All the following questions carry equal marks

(10x2M=20 Marks)

- 1 Define Classification?
- 2 Write any two merits and demerits of Mean?
- 3 Define Kurtosis?
- 4 Find Range to 23,45,6,78,89,12,5,1.
- 5 Define population and sample?
- 6 If we can assert with 95% that maximum error is 0.05 and $p=0.2$. Find the size of the sample.
- 7 Define type I error.
- 8 Define Right tailed test
- 9 write the types of correlation
- 10 Write about two way classification.

Part-B

Answer All the following questions

(5X10M=50 Marks)

- 11 Explain Functions of Statistics? (10m)

OR

- 12 Find mean to the following data. (10m)

Classes	0-10	10-20	20-30	30-40	40-50	50-60	60-70
frequency	23	6	67	3	5	9	10

- 13 Explain Skewness and methods for measuring Skewness? (10m)

OR

- 14 Calculate Quartile Deviation and its co-efficient to the following data. (10m)

Classes	0-15	15-30	30-45	45-60	60-75	75-90	90-105
frequency	6	15	16	3	11	13	10

- 15 A population consists of five numbers 2,3,6,8, and 11. Consider all possible samples of size two Which can be drawn with replacement from this population.

Find

- i) The population mean.
- ii) The standard deviation of the population.
- iii) The mean of the sampling distribution of means.
- iv) Standard deviation of the sampling distribution of means. (10m)

OR

- 16 A population consists of six numbers 4,8,12,16,20 and 24. Consider all possible samples of size two which can be drawn without replacement from this population. Find
- The population mean.
 - The standard deviation of the population.
 - The mean of the sampling distribution of means.
 - Standard deviation of the sampling distribution of means. (10m)
- 17 Experience has shown that 20% of a manufactured product is of the top quality. In one day's production of 400 articles only 50 are of top quality, test the hypothesis at 0.05 level. (10m)

OR

- 18 A simple sample of the heights of 6400 English men has a mean of 67.585 inches and a S.D of 2.56 inches while a simple sample of height of 1600 Australians has mean of 68.55 and a S.D of 2.52. Do the data indicate the Australians are on the average taller than Englishmen use 1% l.o.s. (10m)
- 19 From the following data calculate the correlation coefficient. (10m)

X	23	33	45	78	16	16	65	24	16	57
y	11	13	24	43	15	64	20	45	56	64

OR

- 20 Obtain two Regression lines for the following data. (10m)

X	56	78	75	50	78	80	75	56	56	56
y	62	54	68	45	81	54	68	54	50	70