St .JOSEPH'S COLLEGE OF ARTS & SCIENCE, (AUTONOMOUS)
CUDDALORE-1.

SUBJECT : **MATHEMATICAL STATISTICS - II**
SUBJECT CODE : ASMT202T
DEPARTMENT : STATISTICS
STAFF NAME : P.JULITA MARY AND SARANRAJ

PART –A

Answer ALL the questions

1. Define Binomial distribution.

2. What at is mean and variance of Poisson distribution?

3. Stat the value of Skewness of Normal distribution.

4. Define Chi- square statistic.

5. State the properties of a good estimator.

6. Define point estimation.

7. What is critical region?

8. State any one use of Chi-square test.

9. Distinguish between one tailed test and two tailed test.

10. What is the degrees of to test the independence of attributes?

PART –B

11. a. Derive the moment generating function of Poisson distribution.

(Or)

b. Derive the men and variance of Binomial distribution.

12. a. Derive the mean and variance of Exponential distribution.

(or)

b. If X is normally distributed with mean 50 and standard deviation 5.Find

(I) P(X>60)

(II) P(X<60)

13. a. Explain paired t-test.

(or)

   b. The number of part for a particular spare part in a factory was found to vary from day to day In a sample study the following information was obtained.

Days: Mon   Tue   wed   Thur   Fri   Sat

 No.of parts demanded: 1124   1125   1130   1120   1126   1115

14. a. Explain the test procedure to test the population correlation   co.efficient.

(or)

   b. Find the test value of r in a sample of 27 pairs from a bivariate normal population significant at 5% level.

15. a. Explain the concept of Randomization with an example.

(or)

   b. Explain the concept of local control with an example.

PART –C

16. Derive the recurrence relation for moments of poisson distribution.

17. Derive Students' t distribution.

18. The sales data of an item in six shops before and after a special promotional campaign are as under:

Shops: A   B   C   D   E   F

Before campaign:53   28   31   48   50   42

After campaign: 58   29   30   55   56   45

19.In a sample of 1000 men from a certain city, 450 men are found to be smokers. In a sample of 800 from another city 400 men are found to be smokers. Do the data indicate that the two cities are significantly different with respect to prevalence of smoking habit among men?

20.Analysis the following data obtained the experiment using latin square design and interprets the results.

C 25	B 23	A 20	D 20
A 19	D 19	C 21	B 18
B 19	A 14	D 17	C 20
D 17	C 20	B 21	A 15

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