

**QP CODE**

**Enrollment Number: .....**

**A3050**

**Name: .....**

**M.COM DEGREE EXAMINATIONS, DECEMBER 2024**

**Second Semester**

**M.Com**

**M21CM07DC –Quantitative Techniques**

**(2023 July admissions)**

**Time: 3 Hours**

**Max Marks: 70**

**Section A**

**Answer any five of the following questions in two or three sentences each. Each question carries 2 marks.**

1. What is a probability distribution?
2. What is a Bernoulli's trial?
3. Define Binomial distribution.
4. What is meant by Producer's risk in SQC?
5. What is normal distribution?
6. What is assignable causes?
7. What is a control charts?
8. What is null hypothesis?

**(2X5=10)**

**Section B**

**Answer any six of the following questions in a paragraph each. Each question carries 5 marks.**

9. Distinguish between level of significance and level of confidence.
10. What are the uses of Chi-square test?
11. Describe the different types of correlation.
12. Find Karl pearsons correlation coefficient

X	20	24	32	44	50	60
Y	9	10	11	12	13	14

13. What are the difference between correlation and regression?

14. Find out Spearman's correlation coefficient.

X	50	60	65	50	55	60	50	30	40
Y	10	20	25	15	20	30	35	5	7

15. Explain the characteristics of poisson distribution?

16. What is the difference between a statistic and a parameter?

17. Obtain the Binomial distribution with mean 3 and variance 2.

18. The height of the school children in one institution is normally distributed with a mean of 54 inches and standard deviation 12 inches. What percentage of students have height between 46 and 56 inches?

**(5X6=30)**

### Section C

**Answer any two of the following questions in four pages each. Each question carries 15 marks.**

19. Fit a binomial distribution for the given data and also find the expected frequencies.

X	0	1	2	3	4	5
F	6	20	28	12	8	6

20. A sample of size 324 was drawn and the sample mean was found to be 99. Test whether this sample could have come from the normal population with mean = 100 and S.D. = 6 at 5% level of significance.

X	5	10	15	20	25
Y	20	40	30	60	50

21. Explain Statistical Process Control (SPC) and it's application. Enumerate the major tools used in SPC.

22. Describe the procedure for testing of hypothesis

**(15X2=30)**