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**N – 7205**

**Reg. No. :** .....

**Name :** .....

**Second Semester M.Com. Degree Examination, August 2022**

**Paper III : CO 223 QUANTITATIVE TECHNIQUES AND FINANCIAL  
ECONOMETRICS**

**(2018 Admission onwards)**

**Special Examination**

**Time : 3 Hours**

**Max. Marks : 75**

**PART – A**

**Answer all questions. Each carries 2 marks.**

1. What are the applications of the beta distribution?
2. What are the Mutually exclusive events?
3. What are the Limitations of Classical Definition of probability?
4. What are the properties of Poisson Distribution?
5. Explain augmented Dickey-Fuller test.
6. What is the nature of econometrics?
7. What is a linear model?
8. What are the assumptions in multiple linear regression model?
9. Which are the file formats in which SPSS data can be saved?
10. What are SPSS chart templates?

**(10 × 2 = 20 Marks)**

**P.T.O.**



## PART – B

Answer **any five** questions. Each question carries **5** marks.

11. Which are the different approaches to probability?
12. A committee of 5 is to be formed from a group of 8 boys and 7 girls. Find the probability that the committee consists of at least one girl.
13. An aptitude test was conducted for selecting officers in 4 bank from 1000 students. The average score is 42 and the standard deviation is 24. Assume normal distribution for scores and find.
  - (a) The number of candidates whose score exceed 58.
  - (b) The number of candidates whose score lie between 30 and 66.
14. The probability that an evening college student will graduate is 0.4. Determine the probability that out of 5 students (a) none (b) one, and (c) atleast one will graduate.
15. What are the components of an econometrics model?
16. What is direct regression method? What are properties of the direct regression estimators?
17. It is known from past experience that in a certain plant there are on the average 4 industrial accidents per month. Find the probability that in a given year there will be less than 4 accident. Assume Poisson distribution.
18. Which are the steps in data processing?

**(5 × 5 = 25 Marks)**



## PART – C

Answer **any two** of the following questions. Each question carries **15** marks.

19. A manufacturing firm produces units of products in 4 plants, A, B, C and D. From the past records of the proportions of defectives produced at each plant, the following conditional probabilities are set: A: 0.5: B:0.10: C: 0.15 and D: 0.02. The first plant produces 30% of the units of the output, the second plant produces 25%, third 40% and the forth 5%. A unit of the products made at one of these plants is tested and is found to be defective. What is the probability that the unit was produced in plant C?

20. A systematic sample of 100 pages was taken from a dictionary and the observed frequency distribution of foreign words per page was found to be as follows:

No. of foreign words per page (x) :	0	1	2	3	4	5	6
Frequency (f) :	48	27	12	7	4	1	1

Calculate the expected frequencies using Poisson Distribution.

21. Explain the steps in regression analysis.
22. Explain the features of SPSS as a software for data analysis.

**(2 × 15 = 30 Marks)**

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