



K25U 1443

Reg. No. : .....

Name : .....

**Second Semester B.B.A./B.B.A.(AAM/RTM) Degree (C.B.C.S.S. – OBE –  
Supplementary/Improvement) Examination, April 2025  
(2019 to 2023 Admissions)  
Complementary Elective Course  
2C03BBA/BBA (RTM/AAM) : QUANTITATIVE TECHNIQUES FOR  
BUSINESS DECISIONS**

Time : 3 Hours

Max. Marks : 40

## SECTION – A

Answer **all** questions. **Each** question carries **1** mark.

1. What is the complement of an event ?
2. What is a normal distribution ?
3. What is meant by degrees of freedom ?
4. What is a hypothesis ?
5. What is conditional probability ?
6. What is Type I error ?

(6×1=6)

## SECTION – B

Answer **any six** questions. **Each** question carries **2** marks.

7. On New Year's Eve, the probability of a person having a car accident is 0.09. The probability of a person driving while intoxicated is 0.32 and probability of a person meeting with a car accident while intoxicated is 0.15. What is the probability of a person driving while intoxicated or meeting with a car accident ?
8. List any two limitations of quantitative techniques.
9. What is the frequency approach to probability ?

P.T.O.

K25U 1443

-2-



10. One card is drawn at random from a well-shuffled pack of 52 cards. What is the probability that it will be
  - a) a diamond
  - b) a queen ?
11. What is meant by a priori probability ?
12. State any two utilities of Poisson distribution.
13. Elucidate the role of hypothesis formulation in research.
14. A bag contains 5 white and 3 black balls. Two balls are drawn at random one after the other without replacement. Find the probability that both balls drawn are black. (6×2=12)

## SECTION – C

Answer **any four** questions. **Each** question carries **3** marks.

15. List any three applications of quantitative techniques in business.
16. What is a) Equally likely events b) Trial c) Sample point ?
17. State any three properties of a binomial distribution.
18. Explain the utility of normal distribution.
19. The Quality control assistant takes a sample of 25 units per hour interval at a particular workstation of a production line and inspects them one by one. Based on the past experience, he has estimated that the probability of one unit will be defective by 0.04. Find the probability that
  - a) no piece in the sample is defective.
  - b) 3 pieces in the sample will be defective.
  - c) at most two pieces will be defective.
20. What are the characteristics of a normal distribution ? (4×3=12)



-3-

K25U 1443

## SECTION – D

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

21. State any five limitations of quantitative techniques.
22. What are the addition and multiplication rules for probability ?
23. 100 Car Radios are inspected as they come off the production line and number of defects per set is recorded below

No. of defects	0	1	2	3	4
No. of sets	79	18	2	1	0

Fit a Poisson distribution to the above data and calculate the frequencies of 0, 1, 2, 3 and 4 defects. [ $e^{-0.25} = 0.779$ ].

24. Distinguish between parametric and non-parametric tests. (2×5=10)