



K23U 1792

Reg. No. : .....

Name : .....

II Semester B.B.A./B.B.A. (TTM)/B.B.A. (RTM) Degree (CBCSS-  
Supplementary) Examination, April 2023  
(2017 – 2018 Admissions)  
Complementary Course  
2C03 BBA/BBA(TTM)/BBA (RTM) : QUANTITATIVE TECHNIQUES FOR  
BUSINESS DECISIONS

Time : 3 Hours

Max. Marks : 40

SECTION – A

Answer the 4 questions. Each question carries  $\frac{1}{2}$  mark.

(4 $\times$  $\frac{1}{2}$ =2)

1. What is mutually exclusive event ?
2. What is meant by quantitative techniques in business ?
3. Define significance level.
4. Give one example of Poisson distribution.

SECTION – B

Answer any four questions. Each question carries 1 mark.

(4 $\times$ 1=4)

5. What is Binomial distribution and give one property.
6. Define probability with an example.
7. Define null and alternative hypothesis.
8. Write a short note on Z test.
9. From a pack of 52 cards, one card is drawn at random. Find the probability of getting a king.
10. Name any two quantitative techniques in business.

P.T.O.



## SECTION – C

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

(6×3=18)

11. Explain the uses of quantitative techniques in business industry.
12. Explain Normal distribution and its properties.
13. If A and B are two mutually exclusive events and  $P(A) = \frac{1}{3}$ ,  $P(B) = \frac{1}{2}$ , then find :
  - a) Probability that either A or B will occur.
  - b) Probability that neither A nor B will occur.
  - c) Probability that A and B both will occur.
14. What is Chi-square test ?
15. Write down the probability mass function of Poisson distribution and its two properties.
16. Explain conditional probability with example.
17. What are the steps in fitting of Poisson distribution ?
18. Explain ANOVA with an example.

## SECTION – D

Answer **any two** questions. **Each** question carries **8** marks.

(2×8=16)

19. A city health department wishes to determine if the mean bacteria count per unit volume of water at a lake beach is within the safety level of 200. A researcher collected 10 water samples of unit volume and found the bacteria counts to be 175, 190, 205, 193, 184, 207, 204, 193, 196, 180. Do the data strongly indicate that there is no cause for concern? Test with a level of significance  $\alpha = 0.05$ . Table value is 1.833.
  20.
    - a) State and prove addition theorem of probability for two events.
    - b) State and prove multiplication theorem of probability.
  21. If a random variable X is binomially distributed with 6 trials and a probability of success equal to  $\frac{1}{4}$  at each attempt. What is the probability of :
    - a) Exactly 4 successes ?
    - b) At least one success ?
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