Reg. No. : ....

Name : ....

II Semester B.B.A./B.B.A.T.T.M./B.B.A.R.T.M. Degree (CBCSS – Reg./Sup./Imp.) Examination, April 2019
(2014 Admission Onwards)
COMPLEMENTARY COURSE
2C03 BBA (RTM)/BBA/BBA (TTM) : Quantitative Techniques for Business Decisions

Time : 3 Hours
Max. Marks : 40

PART – A

Answer the 4 questions. **Each** question carries ½ mark.

1. What is dependent event ?

2. What is Type II error ?

3. What is a parameter ?

4. What is statistical inference ?

(4×½=2)

PART – B

Answer **any 4** questions. **Each** question carries 1 mark.

5. What is Chi-square test ?

6. What is level of significance ?

7. What is null and alternative hypothesis ?

P.T.O.

8. Two coins are tossed, what is the probability of getting
   1) Both heads
   2) One head
   3) Atleast one head
   4) No head ?

9. If $P(A) = \frac{1}{13}$, $P(B) = \frac{1}{4}$ and $P(A \cup B) = \frac{4}{13}$. Find $P(A \cap B)$.

10. If 3% of electric bulbs manufactured by a company are defective, find the probability that in a sample of 100 bulbs, exactly five bulbs are defective.

   (4×1=4)

PART – C

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

11. Explain the functions of Quantitative Techniques.

12. Three unbiased coins are tossed. What is the probability of obtaining
    1) All heads
    2) Two heads
    3) One head
    4) Atleast one head
    5) Atleast two heads
    6) At the most one head ?

13. What are the characteristics of normal distribution ?

14. The height of the school children of one institution is normally distributed with mean of 54 inches and S.D. of 12 inches. What percentage of students have height between 46 and 56 inches ?

15. Prices of shares of a company on the different days in a month were found to be 66, 65, 69, 70, 69, 71, 70, 63, 64, 68. Discuss whether mean price of the shares in the month is 65.

16. The average number of articles produced by two machines per day are 200 and 250 with standard deviations 20 and 25 respectively on the basis of 25 days production, can you regard both the machines equally efficient at 1% level of significance ?

17. Explain the uses of χ^2 test.

18. Explain the uses of Z test.   (6×3=18)

PART – D

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

19. In a sample study about the tea habit in two towns following data was observed in a sample of size 100 each.
    Town A : 51% persons were male, 31% were tea drinkers and 19% were male tea drinkers.
    Town B : 46% were male, 26% were tea drinkers and 17% were male tea drinkers. Is there any association between sex and tea habits ?

20. 50 children were given special diet for a certain period and control group of 50 other children were given normal diet. Their average gain in weight were found to be 7.2 lbs and 5.7 lbs respectively and the common standard deviation for gain in weight was 2 lbs. Assuming normality of the distributions would you conclude that the special diet really promoted weight ?

21. Eight coins were tossed 256 times. The results obtained are given below. Test whether the coins are unbiased.

No. of heads	0	1	2	3	4	5	6	7	8
Frequency	2	10	25	50	75	58	21	9	6

Apply χ^2 test.   (2×8=16)