

B. COM DEGREE END SEMESTER EXAMINATION - MARCH 2024**SEMESTER 2 - COMMERCE****COURSE : 19U2CRCOM05 - QUANTITATIVE TECHNIQUES FOR BUSINESS RESEARCH***(For Regular - 2023 Admission and Improvement / Supplementary – 2022/2021/2020/2019 Admissions)*

Time : Three Hours

Max. Marks: 75

PART A**Answer any 10 (2 marks each)**

1. What do you understand by glossary?
2. What is meant by critical value?
3. Explain multi-stage sampling.
4. What is meant by Coefficient of determination?
5. Define Primary Data.
6. Define a research report.
7. What is meant by appendix?
8. A pack contains 4 blue, 2 red and 3 black pens. If 2 pens are drawn at random from the pack, not replaced and then another pen is drawn. What is the probability of drawing 2 blue pens and 1 black pen?
9. Distinguish between one-tailed and two-tailed test.
10. What is sampling error?
11. What are sure and impossible events?
12. Why is the study of correlation important?

(2 x 10 = 20)**PART B****Answer any 5 (5 marks each)**

13. What are the major components of bibliography?
14. How many different words containing all letters of the word EMACITY can be formed? in how many of them a) all vowels are together b) vowels are never together c) no two vowels are together?
15. How many different words containing all letters of the word MACHINE can be formed? in how many of them a) all vowels are together b) vowels are never together c) no two vowels are together?
16. State the properties of regression coefficient
17. Write notes on Research approach.
18. Explain the uses of Z-test. Also state the assumptions in Z- test.
19. Calculate the coefficient of correlation between rainfall and agricultural production through Karl Pearson's Co-efficient of Correlation

Rainfall	22	24	26	28	30	32	34
Production	40	36	25	50	48	46	38

20. 20 students took a management course examination. The sample variance is found to be 80. The teacher claims that based on this past experience the true variance has 100. Does the sample result show that variance in the sample is significantly different?

(5 x 5 = 25)

PART C
Answer any 3 (10 marks each)

21. Two sets of ten students selected at random from a collage were taken, one was given memory test as they were and the other set was given a memory test after two week's training and the scores were given below.

Set A:	10	8	7	9	8	10	9	6	7	8
Set B:	12	8	8	10	8	11	9	8	9	9

Test whether there is a significant difference in mean scores. [Table value of t for 18 d. f = 2.101]

22. Calculate correlation coefficient and regression co-efficient for the following data.

X	8	7	10	30	35	40	45	50	55	60
Y	4	3	7	10	15	17	18	20	22	24

Find the estimate of Y when X is 70.

23. Two cards are drawn one by one without replacement. Find the probability that
- The first card is an ace
 - The first card is a club-ace or a queen
 - At least one is a number card
 - At least one is a face card
 - Both are face cards
 - Not more than one card is a number card
 - Second card is not a diamond
 - Cards are of different symbols.
 - The cards are jack or heart or both.

24. Explain the principles of report writing.

25. Below are given gain in weight (lbs) of cows fed on 2 diets X and Y .

Diet X :	25	32	30	32	24	14	32			
Diet Y :	24	34	22	30	42	31	40	30	32	35

Test at 5% level whether the diets differ as regards their effect on mean increase in weight. [Table value of t for 15 d. o. f at 5% = 1.753]

(10 x 3 = 30)