B.COM. DEGREE END SEMESTER EXAMINATION - MARCH/APRIL 2019

SEMESTER - 2: SUBJECT- **COMMERCE (CORE COURSE)**

COURSE: **15U2CRCOM4, QUANTITATIVE TECHNIQUES FOR BUSINESS RESEARCH**

(Common for Regular 2018 / Supplementary – Improvement 2017/2017/2015 Admission)

Time: Three Hours   Max. Marks: 75

SECTION - A

I. *Answer all the questions. Each question carries 2 Marks.*

1. What is a technical report?
2. What is applied research?
3. Explain the importance of research.
4. Define the term Correlation.
5. What are the characteristics of a good hypothesis?
6. Explain a frequency curve.
7. What is standard Error?
8. What is a bar diagram?
9. Define Sample space.
10. Distinguish between population and sample.   (2 x 10 = 20)

SECTION - B

II. *Answer any Five Questions. Each Question carries 5 Marks.*

11. The probability that a student passes a Physics test is 2/3 and the probability that he passes both Physics and English test is 14/45. The probability that he passes at least one test is 4/5. What is the probability that the student passes the English test?

12. Find the mean value of two random variables x and y and the Correlation Coefficient between them when the two lines of regression are given by:

    5x + 7y - 22 = 0 and 6x + 2y - 20 = 0

    If the variance of y is 15, find the standard deviation of x.

13. Distinguish between Primary and secondary data.

14. The marks obtained by students in Physics and Mathematics are as follows:

Marks in Physics (X)	35	23	47	17	10	43	9	6	28
Marks in Mathematics (Y)	30	33	45	23	8	49	12	4	31

    Compute their ranks in the two subjects and the Coefficient of Correlation of ranks.

15. What are two tailed and one tailed tests?

16. Indicate how many four digit numbers greater than 7000 can be formed from the digits 3, 5, 7, 8, 9.

17. A student calculated the value of r as 0.7 and when the number of items is 25. Find the limits within which r lies for another sample from the same universe. (5 x 5 = 25)

SECTION - C

III. *Answer any Three Questions. Each Question carries 10 Marks.*

18. For a bivariate data, the mean value of x is 20 and the mean value of Y is 45. The regression coefficient of Y on X is 4 and that of X on Y is (1/9). Find

    (i) the coefficient of correlation

    (ii) the standard deviation of X if the standard deviation of Y is 12.

19. The following figures relate to the cost of construction of a house in Delhi:

Item	Cement	Steel	Bricks	Timber	Labour	Miscellaneous
Expenditure	20%	18%	10%	15%	25%	12%

    Represent the data by a suitable diagram.

20. The coefficient of rank correlation of the marks obtained by 10 students in statistics and accountancy was found to be 0.8. It was later discovered that the difference in ranks in the two subjects obtained by one of the students was wrongly taken as 7 instead of 9. Find the correct coefficient of rank correlation?

21. Explain briefly the steps and characteristics of a sample design.

22. What is a research report? Explain briefly the contents of a report.

(10 x 3 = 30)

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