B.COM. DEGREE END SEMESTER EXAMINATION – JULY 2021

SEMESTER –2: COMMERCE (CORE COURSE)

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

(Common for Supplementary 2018/2017/2016 /2015 Admissions)

Time: Three Hours   Max Marks: 75

SECTION A

Answer all the questions. Each questions carries 2 marks.

1. What is Combination?
2. Explain popular report.
3. What do you mean by exhaustive events?
4. What is linear regression?
5. What is pure research?
6. State the properties of correlation coefficient.
7. What is Appendix?
8. What is Random experiment?
9. Differentiate between Histogram and Bar Diagram
10. What is quota Sampling?   (2 x 10 = 20)

SECTION B

Answer any five questions Each questions Comes 5 marks

11. A library received 20 books including 8 Hindi novels. If 2 of these books are selected at random. What is the probability that none of them is a Hindi novel?

12. Following were the results obtained from an analysis of 12 pairs of observation:

    N: 12, $\sum X = 30$, $\sum Y = 5$, $\sum X^2 = 670$

    $\sum Y^2 = 285$, $\sum xy = 334$

    Later on it was discovered that one pair of values (X=11, Y=4) were copied wrongly; the correct values of the pair were (X=10, Y=14). Find the correct value of correlation coefficient.

13. What are the requsites of a good report?

14. You are given the following data :

	X	Y
Arithmetic mean	36	85
Standard deviation	11	8

    Correlation coefficient between X and Y = 0.66

    (i)   Find the two regression equations.
    (ii)   Estimate value of X when Y = 75

15. Discuss the meaning; utility and limitations of the diagrammatic representation of statistical data.
16. Urn 1 contains 4 red and 6 black balls and urn 2 contains 6 red and 4 black balls. One urn is chosen at random and a ball is drawn from it. The color of the ball drawn is black. What is the probability that it has drawn from urn 1.
17. If X=0.85 Y and Y = 0.89 X, σ x =3, calculate σ y and r.

(5 x 5 = 25)

SECTION C

Answer any three questions Each questions Carries 10 marks

18. The following table gives the results of CBSE examination held in march 2018.

Age of Candidates	13	14	15	16	17	18	19	20	21
Percentage of failure	39	41	43	34	37	39	49	47	55

Calculate the coefficient of correlation , and probable error. Also estimate the standard error and comment on the result.

19. The adjoining table gives the break up of the expenditure of a family on different items of consumption. Draw percentage bar diagram to represent the data.

Item	Expenditure(Rs.)
Food	240
Cloth	66
Rent	125
Fuel and Lighting	57
Education	42
Miscellaneous	190

20. Ten competitors in a beauty contest are ranked by three judges in the following order :-

First Judge:	1	5	4	8	9	6	10	7	3	2
Second Judge:	4	8	7	6	5	9	10	3	2	1
Third Judge :	6	7	8	1	5	10	9	2	3	4

Use the rank correlation coefficient to discuss which pair of judges have the nearest approach to common tastes in beauty.

21. Explain the layout of a report.
22. Briefly describe the different steps involved in a research process

(10 x 3 = 30)