Reg. No…….. Name…… **18U216**

B. COM DEGREE END SEMESTER EXAMINATION – MARCH/APRIL 2018

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

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

(Common for Regular 2017 / Supplementary - Improvement 2016 / 2015 Admission)

Time : Three Hours Max. Marks : 75

SECTION A

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

1. What is a popular report?
2. What is pure research?
3. Explain the objectives of research.
4. Define Regression analysis.
5. What are the characteristics of a good sample?
6. Explain a frequency polygon.
7. What do you mean by analysis of data?
8. What is graphical representation?
9. Define Random experiment.
10. Explain the terms population and sample. (2 x 10 = 20)

SECTION B

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

11. A problem in Statistics is given to two students A and B. The odds in favour of A solving the problem are 6 to 9 and against B solving the problem are 12 to 10. If A and B attempt, find the probability of the problem being solved.
12. The following data are given regarding expenditure on advertising and sales of a particular firm:

Advertisement expenditure	sales (Rs. Lakhs)
	(X)	(Y)
Mean	10	90
Standard deviation	3	12

Correlation Coefficient r = 0.8

(i)Calculate the regression equation of Y on X.

(ii)Estimate the advertisement expenditure required to attain a sales target of Rs. 120 lakhs.

13. Differentiate between Sampling and Non sampling error.
14. Ten students got the following percentage of marks in Mathematics and Physics.

Mathematics (X):	8	36	98	25	75	82	92	62	65	35
Physics (Y) :	84	51	91	60	68	62	86	58	35	49

Find the coefficient of rank correlation.

15. What are Type I and Type II Errors?

16. How many words can be formed out of the letters of the word TRIANGLE which will begin with T.
17. A student calculates the value of r as + 0.72 for a question comprising 5 pairs of observations and concludes that there is high degree of Correlation between the variables. Do you justify his conclusion? (5 x 5 = 25)

SECTION C

III. Answer any 3 Questions. Each Question carries 10 Marks.

18. For 100 students of a class, the regression equation of marks in statistics (X) on the marks in commerce (Y) is 3Y - 5X + 180 = 0. The mean mark in commerce is 50 and variance of marks in statistics is $4/9^{th}$ of the variance of marks in commerce. Find the mean marks in statistics and the Coefficient of Correlation between marks in the two subjects.
19. Draw a pie diagram to represent the following data on the proposed outlay of a Five year plan.

Items	Rs. In Crores
Agriculture	: 6000
Industry and Minerals	: 4000
Irrigation and power	: 2500
Communication	: 4500
Miscellaneous	: 3000

20. In a Correlation analysis, the value of the Karl Pearson's Coefficient of Correlation and its probable error were found to be 0.90 and 0.04 respectively. Find the value of n.
21. Explain briefly probability and non-probability sampling techniques.
22. What is research? Explain briefly the various types of research.

(10 x 3 = 30)

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