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FOURTH SEMESTER (CBCSS—UG) DEGREE EXAMINATION
APRIL 2021

B.Com.

BCM 4C 04—QUANTITATIVE TECHNIQUES FOR BUSINESS

Time : Two Hours and a Half

Maximum : 80 Marks

Section A

Answer at least ten questions.

Each question carries 3 marks.

All questions can be attended.

Overall Ceiling 30.

1. What are the different types of Quantitative Techniques ?
2. What is meant by Combination ?
3. What is Differentiation ?
4. Distinguish between correlation and regression analysis.
5. What is Scatter diagram ?
6. What is regression line ?
7. What is random experiment ?
8. What is inverse probability ?
9. What is discrete probability distribution ?
10. What is standard error ?
11. A factory manager purchased 3 new machines, A, B and C. How many numbers of times he can arrange the 3 machines ?
12. How many different sets of 5 students can be chosen out of 20 qualified students to represent a school in an essay context ?
13. What is the probability of picking a card that was red or black ?
14. Calculate coefficient of determination and non-determination if coefficient of correlation is 0.8.

Turn over

15. The coefficient of rank correlation between marks in English and Maths obtained by group of 10 students in the group is 0.8. If the sum of the squares of the difference in ranks is given to be 33, find the number of students in the group.

$$(10 \times 3 = 30)$$

Section B

Answer at least five questions.

Each question carries 6 marks.

All questions can be attended.

Overall Ceiling 30.

16. What are the merits and demerits of concurrent deviation method ?

17. What is classical definition of probability ? What are its limits ?

18. Describe the practical use of Poisson distribution.

19. What is Parametric test ? What are the different types of it ?

20. The Coefficient of rank correlation of the marks obtained by 10 students in Statistics and Economics was 0.2. It was later discovered that the difference in ranks of one of the students was taken as 7 instead of 9. Find the correct result.

21. What is the probability of getting 3 red balls in a draw of 36 balls from a bag contains 5 red and 46 black balls ?

22. Find out coefficient of correlation between size and defect in quality of shoes :

Size	: 15-16	16-17	17-18	18-19	19-20	20-21
No. of shoes Produced	: 200	270	340	360	400	300
No. of defectives	: 150	162	170	180	180	114

23. Calculate coefficient of correlation by concurrent deviation method :—

Year	: 2003	2004	2005	2006	2007	2008	2009	2010	2011
Supply	: 160	164	172	182	166	170	178	192	188
Price	: 292	280	260	234	266	254	230	190	200

$$(5 \times 6 = 30)$$

Section C

Answer any two questions.

Each question carries 10 marks.

Discuss the functions and uses of quantitative techniques.

Discuss the important theorems of probability.

Obtain rank correlation coefficient for the data :—

X	:	68	64	75	50	64	80	75	40	55	64
Y	:	62	58	68	45	81	60	68	48	50	70

A' speaks truth in 70 % cases and 'B' in 85 % cases. In what percentage of cases they likely to contradict each other in stating the same fact ?

(2 x 10 = 20 marks)