



QP CODE: 22101426

Reg No :

Name :

**B.COM DEGREE (CBCS) IMPROVEMENT / REAPPEARANCE EXAMINATIONS,
MAY 2022**

Fourth Semester

Core Course - CO4CRT12 - QUANTITATIVE TECHNIQUES FOR BUSINESS-II

(Common for B.Com Model II Computer Applications ,B.Com Model II Finance & Taxation ,B.Com Model II Marketing ,B.Com Model II Travel & Tourism ,B.Com Model III Office Management & Secretarial Practice ,B.Com Model III Taxation ,B.Com Model III Computer Applications ,B.Com Model III Travel & Tourism ,B.Com Model I Computer Applications ,B.Com Model I Co-operation ,B.Com Model I Marketing ,B.Com Model I Finance & Taxation ,B.Com Model I Travel & Tourism ,B.Com Model II Logistics Management)

2017 Admission Onwards

C639485A

Time: 3 Hours

Max. Marks : 80

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. If the Co-variance between X and Y is 488 and variance of X and Y are 824 and 325 respectively. Find out co-efficient of correlation.
2. Calculate coefficient of correlation.
Rank
1 1 4 3 2
Rank
2 2 3 4 1
3. Find out the Probable error if $r = .6$ and $n=64$. Also calculate the standard error and interpret the result.
4. Describe the limitations of regression.
5. Write a note on regression lines?





6. What is Unit Test of Index Numbers?
7. Explain Laspeyre's method of constructing index numbers.
8. What do you mean by Base Shifting?
9. Define Time Series.
10. What are the two types of Secular Trend?
11. List the sample space in throwing 2 dice .
12. One number is drawn from numbers 1 to 100. find the probability that it is either divisible by 3 or 5.

(10×2=20)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. What are the different types of correlation?
14. What is Concurrent Deviation method? Explain its merits and demerits.
15. Given the following data, what would be the possible yield of rice per acre when rainfall is 29cm?. Coefficient of correlation between rainfall and yield is 0.8.

	Rainfall	Yield
Mean	25	40
variance	9	36

16. From the following data, construct index numbers under Simple Aggregate Expenditure method and Average of Relative Method.

Commodities	Price in 2017	Price in 2018
A	60	80
B	30	45
C	18	22
D	120	150
E	65	65





17. Construct with the help of the data given below, Fisher's Ideal Index Number and show how it satisfies the Factor Reversal Test:

Commodity	Base Year Price	Base Year Quantity	Current Year Price	Current Year Quantity
A	6	50	10	56
B	2	100	2	120
C	4	60	6	60
D	10	30	12	24
E	8	40	12	36

18. Explain the advantages and disadvantages of moving average method.
19. The trend of the annual sales of B Ltd. is described by the equation $Y=12+0.7x$ (Origin: July 2008, x unit = 1 year and y unit = annual production). Shift the origin to January 2008.
20. In how many ways can a cricket team be selected from a group of 25 players consisting of 10 Batsmen, 8 Bowlers, 5 All rounders and 2 Wicket-keepers? Assume that the team of 11 players requires 3 Batsmen, 3 All rounders, 2 Bowlers and 1 Wicket Keeper?
21. A University has to select an examiner from the list of 50 persons, 20 of them women and 30 men, 10 of them knowing Hindi and 40 not, 15 of them being teachers and the remaining 35 not. What is the probability of the university selecting a Hindi knowing woman teacher?

(6×5=30)

Part C

Answer any **two** questions.

Each question carries **15** marks.

22. Compute Pearson's Co-efficient of correlation from the following data taking 60 and 70 as the assumed averages of X and Y variables respectively. Also see if it comes between 0.85 and 0.95

X	45	55	56	58	60	65	68	70	75	80	85
Y	56	50	48	60	62	64	65	70	74	82	90





23. A panel of judges A and B graded seven debators and independently awarded the following marks:

Debator	Marks by A	Marks by B
1	40	32
2	34	39
3	28	26
4	30	30
5	44	38
6	38	34
7	31	28

An eighth debator was awarded 36 marks by Judge A while Judge B was not present. If judge B were also present, how many marks would you expect him to award to the 8th debator assuming that the same degree of relationship exists in their judgement?

24. The following are the figures of production (in thousand tonnes) of a sugar factory:

Year	2012	2013	2014	2015	2016	2017	2018
Production	77	88	94	85	91	98	90

- (i) Fit a straight line by the method of least squares and find the trend values
(ii) What is the monthly increase in production?

25. In a bolt factory, Machines M1, M2 and M3 manufacture respectively 25,35 and 40percentof the total.Out of the output5,4 and 2 percent respectively are defective bolts.One bolt is drawn at random from the product and is found defective. What is the probability that it was manufactured in the Machine M1.

(2×15=30)

