QP CODE: 20100876

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Reg No : .....

Name : .....

B.Com DEGREE (CBCS) EXAMINATION, MARCH 2020

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

B9E38708

Time: 3 Hours Marks: 80

Part A

Answer any ten questions.

Each question carries 2 marks.

1. Define correlation.
2. What is a Correlation Graph?
3. Calculate coefficient of correlation.

Marks by Judge 1	45	34	39
Marks by Judge2	44	38	41

4. Write a note on curve of regression.
5. What are regression coefficients?
6. What do you mean by Quantity Index Number?
7. From the following, construct Price Index using Laspeyre's Method

Commodities	Price		Quantity	
	Base Year	Current Year	Base Year	Current Year
W	6	14	15	22
X	12	15	4	10
Y	10	16	12	14
Z	25	28	45	45

8. Explain Cost of living Index Numbers.

9. What do you mean by Time Series?

10. What do you mean by Irregular variations?

11. Restate in own words equally likely events.

12. How many different words can be formed out of the letters of the word "COLLEGE"?

(10×2=20)

Part B

Answer any six questions.

Each question carries 5 marks.

13. Explain the steps for calculating Karl Pearson's coeffiicient of correlation.

14. The following table gives the result of the SSLC examination of a town held in March 2015.

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 co-efficient of correlation and estimate probable and standard errors. From the result can you definitely assert that failure is correlation with age?

15. From the following estimate the yield of crops when rainfall is 22 cms:

	Yield in kgs	Rainfall in cms
Mean	508.4	26.7
Standard deviation	36.8	4.6

Coefficient of correlation between yield and rainfall is 0.52.

16. From the following data, calculate price index under Simple Aggregative Method and Simple Average of Relatives Method:

Commodities	Price in 2017	Price in 2018
Rice	12	14
Wheat	14	18
Oil	40	55
Pulses	25	35

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. Trend equation obtained is y=21+1.2x with 2000 = 0. find the trend equation shifting the origin to 1998.

20. Tickets are numbered from 1 to 100. They are shuffled and a ticket is drawn at random. What is the probability that the drawn ticket has :i) An even number; ii)A number 5 or multiple of 5; iii)a number which is greater than 75; iv)A number which has a perfect square.

21. If the probability that 'A' project will have an economic life of 20 years is 0.7 and the probability that 'B' project will have an economic life of 20 years is 0.5. What is the probability that both will have an economic life of 20 years.

(6×5=30)

Part C

Answer any two questions.

Each question carries 15 marks.

22. From the following data determine the co-efficient of concurrent deviation.

Price	7	9	10	8	7	6	5	6	7	6	9	40
Supply	50	60	55	70	80	120	110	60	40	70	65	40

23. Obtain the equations of the two lines of regression for the data given below:

X	1	2	3	4	5	6	7	8	9
Y	9	8	10	12	11	13	14	16	15

24. Given below are the figures of production of a factory:

Year	2012	2013	2014	2015	2016	2017	2018
Production	800	900	920	830	940	990	920

(i) Fit a straight line trend to those figures.

(ii) What is the most likely production in the year 2019?

(iii) Plot these figures on a graph and show the trend line.

25. In a bolt factory, Machines M1, M2 and M3 manufacture respectively 25,35 and 40percent of the total.Out of the output 5,4 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)