19U424 (Pages: 2) Name: …………………

Reg. No: …………………

FOURTH SEMESTER B.B.A. DEGREE EXAMINATION, APRIL 2021
(CBCSS - UG)
CC19U BBA4 C04 - QUANTITATIVE TECHNIQUES FOR BUSINESS
(BBA - Complementary Course)
(2019 Admission - Regular)

Time: 2.5 Hours

Maximum: 80 Marks

Credit: 4

Part A (Short answer questions)

Answer *all* questions. Each question carries 2 marks.

1. Define Quantitative technique.

2. Write four mathematical quantitative technique in QT.

3. How is time series analysis useful for business forecasting?

4. What are the uses of studying secular trend?

5. Explain the significance of index numbers.

6. What are the 'bias in relation to Index Numbers?

7. Even a high degree of correlation does not mean that a relationship of cause and effect exists between the variables. Discuss.

8. What you mean by linear and non linear correlation?

9. What are the merits of rank correlation?

10. Explain the utility of regression analysis.

11. Define Probability distribution.

12. Write the range of probability.

13. Two coins are tossed, what is the probability of getting (1) both heads, (2) one head, (3) at least one head, (4) no head.

14. Define random variable.

15. Comment on the following: For a Poisson distribution, Mean = 8 and Variance = 7.

(Ceiling: 25 Marks)

Part B (Paragraph questions)

Answer *all* questions. Each question carries 5 marks.

16. Discuss the scope and limitation of the quantitative techniques.

17. Define Time series. Explain its components.

18. What are the problems faced in the construction of Index numbers?

19. Explain the properties of normal distribution.

20. Find coefficient of correlation for the following data.

   X : 12 20 15 22 18 24 20 12 15 22

   Y : 30 35 28 36 29 39 30 25 30 38

21. Find the regression equation of Y on X.

   X : 2 4 6 8 10

   Y : 5 7 9 8 11

22. The probability that a student Mr. X passes Mathematics is 2/3, the probability that he passes statistics is 4/9. If the probability of passing at least one subject is 4/5, what is the probability that Mr. X will pass both the subject?

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

(Ceiling: 35 Marks)

Part C (Essay questions)

Answer any *two* questions. Each question carries 10 marks.

24. What is consumer price index number? Explain the steps in the construction of consumer price index numbers.

25. Establish correlation between the following pair of series and find out the probable error. Also interpret.

   X : 17 19 20 22 24 27 29 30 33 35

   Y : 87 85 80 78 75 72 70 65 62 60

26. There are two urns one containing 5 white and 4 black balls and other containing 6 white and 5 black balls. One urn is chosen and one ball is drawn. If it is white, what is the probability that the urn selected is the first?

27. Fit a straight-line trend to the following series by the method of least squares.

Year	2001	2002	2003	2004	2005	2006	2007
Production of steels (000 tons)	10	13	12	14	12	16	14

(2 × 10 = 20 Marks)

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