

23U458

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Name :

Reg. No :

FOURTH SEMESTER B.B.A. DEGREE EXAMINATION, APRIL 2025

(CBCSS-UG)

(Regular/Supplementary/Improvement)

CC19U BBA4 C04 - QUANTITATIVE TECHNIQUES FOR BUSINESS

(BBA - Complementary Course)

(2019 Admission onwards)

Time: 2.5 Hours

Maximum: 80 Marks

Credit: 4

Part A (Short answer questions)

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

1. Write four functions of Quantitative technique.
2. State four applications in QT.
3. What is Analysis of Time series?
4. How is time series analysis useful for business forecasting?
5. What are Composite Index Numbers?
6. Distinguish between explicit weights and implicit weights.
7. Define correlation.
8. Write four properties of correlation coefficient.
9. Explain the concept of regression.
10. What are the properties of regression coefficient?
11. What is equally likely event?
12. Two coins are tossed, what is the probability of getting (1) both heads, (2) one head, (3) at least one head, (4) no head.
13. If $P(A)=1/5$, $P(B)=1/4$ and $P(A \cap B)=1/10$. Find $P(A \cup B)$.
14. How to fit a poisson distribution?
15. Write the density function of Normal distribution.

(Ceiling: 25 Marks)

Part B (Paragraph questions)

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

16. Explain the limitations of QT in detail.

17. Define trend. What are the various methods of measuring it?
18. What are the uses of Index Numbers ?
19. Find Karl Pearson's coefficient of correlation between X and Y From the following data giving test scores of 10 candidates in mathematics and statistics and interpret.
 Score in mathematics : 98 70 40 20 85 75 95 80 10 5
 Score in statistics : 85 65 32 30 80 60 80 70 20 10
20. The coefficient of rank correlation of the marks obtained by 10 students in statistics and Accountancy was 0.2. It was later discovered that the difference in ranks in the two subjects of one of the students was wrongly taken as 7 instead of 9. Find the correct result.
21. A class consists of 80 students, 25 of them are girls and 55 boys. 10 of them are rich and remaining poor. 20 of them are fair complexioned. What is the probability of selecting a fair complexioned rich girl?
22. The overall percentage of failure in a certain examination is 40%. What is the probability that out of a group of 6 candidates at least 4 passed the examination.
23. In a town 10 accidents took place in a span of 50 days. Assuming that the number of accidents follows poisson, find the probability that there are 2 accidents in a day.

(Ceiling: 35 Marks)

Part C (Essay questions)

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

24. What are the main classifications of Quantitative techniques?
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. The probability that a doctor will diagnose a particular disease correctly is 0.6. The probability that a patient will die by his treatment after correct diagnosis is 0.4 and the probability of death by wrong diagnosis is 0.7. A patient of the doctor who had the disease died. What is the probability that his disease was not correctly diagnosed.
27. Five coins are tossed 3200 times. Find the frequencies of the distribution of heads and tails. Calculate the mean and standard deviation.

(2 × 10 = 20 Marks)
