

21U460

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Name:

Reg.No:

FOURTH SEMESTER B.B.A. DEGREE EXAMINATION, APRIL 2023

(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. Define Quantitative technique.
2. Write four areas or scope of QT.
3. Explain the usefulness of analysis of time series for businessmen.
4. What is linear trend?
5. Define index number.
6. What are the 'bias in relation to Index Numbers ?
7. What are the uses of correlation in a business?
8. Write notes on scatter diagram .
9. What are the merits of rank correlation?
10. Write four limitations of regression?
11. Three unbiased coins are tossed. What is the probability of obtainig (1) all heads (2) two heads (3) one head (4) at least one head
12. Find the probability of drawing an ace or a spade from a pack of cards.
13. Explain Baye's Theorem.
14. How to fit a binomial distribution?
15. What is Poisson distribution?

(Ceiling: 25 Marks)

Part B (Paragraph questions)

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

16. Explain the role of quantitative technique in business management.

17. Define Time series. Explain its significance and utility.
18. Explain in detail about various steps in the construction of Index numbers.
19. Is there any correlation between X and Y?
 X : 200 270 340 310 400
 Y : 150 162 170 180 180
20. In a correlation analysis the value of the Karl Pearson coefficient of a correlation and its probable error were found to be .90 and .04 respectively. Find out the value of "n".
21. There are 4 men and 3 women. Find the probability of selecting 3 of which (1) exactly 2 are women, (2) no woman, (3) at least 1 woman, (4) at least 2 women, (5) at most 2 women
22. A problem in Statistics is given to students A, B and C whose chances of solving are $\frac{1}{2}$, $\frac{1}{3}$ and $\frac{1}{4}$ respectively. What is the probability that the problem will not be solved?
23. Write down all the terms of the binomial distribution with parameters $n=4$, $p=\frac{1}{3}$

(Ceiling: 35 Marks)

Part C (Essay questions)

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

24. Find the current consumer price index with the help of the data given below.

Item	Weight	Basic Price	Current Price
Barber	21	0.05	0.12
Washerman	23	0.04	0.16
Soap	12	0.50	1.60
Batelnut	21	0.50	3.20
Bins	23	0.05	0.24

Using (1) Simple average of price relative method (2) Weighted average of price relatives

25. From the following data, obtain the two regression equations.

Sales : 91 97 108 121 67 124 51 73 111 57

Purchases : 71 75 69 97 70 91 39 61 80 47

26. The chance that a female worker in a chemical factory will contract an occupational disease is 0.4 and the chance for a male worker is 0.06. Out of 1000 workers in a factory 200 are females. One worker is selected at random and is found to have contacted the disease. What is the probability that the worker is female?
27. What is normal distribution? What are the properties of normal distribution?

(2 × 10 = 20 Marks)
