D 120484 **(Pages : 3)** **Name.....**

Reg. No.....

FOURTH SEMESTER (CBCSS—UG) DEGREE EXAMINATION
APRIL 2025

B.Com.

BCM 4C 04 QUANTITATIVE TECHNIQUES FOR BUSINESS

(2019—2023 Admissions)

Time : Two Hours and a Half Maximum : 80 Marks

Answers should be written in English only.

Part A

Answer **all** *questions.*

1. What is a probability distribution ?
2. What is strategic decision ?
3. Write any *two* merits and demerits of Karl Pearson's correlation co-efficient.
4. Define regression.
5. Calculate the probability of drawing a white ball from a bag containing 7 white and 8 black balls.
6. What is total regression analysis ?
7. Define a Binomial Distribution.
8. Write down any *two* basic assumptions of linear programming problem.
9. State any *four* features of Quantitative Techniques.
10. Give the Classical Define of probability.
11. What is Independent event ?
12. Write down any *two* utility of Quantitative techniques.
13. What is negative correlation ?

Turn over

14. Determine the number of ways one can form a three letter words from the letters in the word 'SMILE'.

15. What is a constraint ?

(15 × 2 = 30, maximum ceiling 25 marks)

Part B

Answer **all** *questions.*

16. A piece of equipment will function only when the three components A, Band C are working. The probability of A failing during the one year is 0.15 that of B failing is 0.05 and C failing is 0.10. What is the probability that the equipment will fail before the end of the year.

17. Explain the uses of regression analysis.

18. State the area properties of a Normal Distribution

19. What are the limitations of Quantitative Techniques ?

20. What are the uses of Poisson Distribution ?

21. Three per cent of a given lot of manufactured parts are defective. What is the probability that in a sample of four items none will be defective ? (Use Binomial Equation).

22. Explain the applications of Linear Programming in Business and Industry.

23. Explain steps in decision making.

(8 × 5 = 40, Maximum ceiling 35 marks)

Part C

Answer any **two** *questions.*

24. Discuss the properties of normal distribution.

25. From the following data obtain the two regression equations by the method of least square :

X :	2	3	7	8	10
Y :	10	9	11	8	12

26. In an entrance test for admission 900 students appeared. Their average marks were 50 and standard deviation is 20. Assuming Normal distribution find :

    (a) Number of students securing marks in between 30 and 70 ; and

    (b) Number of students securing marks above 65.

27. Explain the different methods of classifying quantitative techniques.

(2 × 10 = 20 marks)