

D 140754

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Name.....

Reg. No.....

**FOURTH SEMESTER (CBCSS—UG) DEGREE EXAMINATION
APRIL 2026**

B.Com.

BCM 4C 04—QUANTITATIVE TECHNIQUES FOR BUSINESS

(2019 Syllabus)

Time : Two Hours and a Half

Maximum : 80 Marks

*Answers should be written in English only.***Section A***Answer **all** the questions ; 2 marks each 15 questions.**(Max. 25 Marks)*

1. Define Correlation.
2. What is a Venn Diagram ?
3. Define Probability.
4. What is a Scatter Diagram ?
5. Explain any *two* limitations of Quantitative Techniques.
6. Define Regression.
7. Explain the merits of Pearson's Co-efficient of Correlation.
8. What is the Sample Space ?
9. What are equally likely Events ?
10. What are Permutations ?
11. What is Decision making Process ?
12. What is Schematic models ?
13. What are Decision Variables in Linear Programming ?
14. What is Normal Distribution ?
15. Explain Baye's theorem.

Turn over

Part B

*Answer **all** the questions ; 5 marks each.
(Max. 35 marks)*

16. Explain the properties of the Poisson Distribution.
17. Explain the advantages of Quantitative Techniques.
18. What are the importance of the normal distribution ?
19. Explain the steps in decision-making.
20. Assume the mean height of soldiers to be 68.22 inches with a variance of 10.8 inches. How many soldiers of a regiment of 1000 would you expect to be over six feet tall ?
21. In a Binomial Distribution consisting of 5 independent trials, probability for 1 and 2 successes are 0.4096 and 0.2048, respectively. Find the parameter p .
22. The coefficient of rank correlation between marks in English and maths obtained by a group of students is 0.8. If the sum of the squares of the difference in ranks is given to be 33, find the number of students in the group.
23. Find p ($-1.52 < z < 0.75$).

Part C

*Answer any **two** questions.
10 marks each.*

24. Explain the uses of quantitative techniques in the field of business and industry.
25. Explain the advantages and disadvantages of Decision Tree Analysis.
26. Find the regression equations x and y and y on x from the following :

X	:	25	30	35	40	45	50	55
Y	:	18	24	30	36	42	48	54

27. The following were the ranks given by three judges in a beauty context. Determine which pair of judges has the nearest approach to Common tastes in beauty :

Judge I	:	1	6	5	10	3	2	4	9	7	8
Judge II	:	3	5	8	4	7	10	2	1	6	9
Judge III	:	6	4	9	8	1	2	3	10	5	7

(2 × 10 = 20 marks)

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(2019 Syllabus)

(Multiple Choice Questions for SDE Candidates)

Time : 15 Minutes**Total No. of Questions : 20****Maximum : 20 Marks****INSTRUCTIONS TO THE CANDIDATE**

1. This Question Paper carries Multiple Choice Questions from 1 to 20.
2. The candidate should check that the question paper supplied to him/her contains all the 20 questions in serial order.
3. Each question is provided with choices (A), (B), (C) and (D) having one correct answer. Choose the correct answer and enter it in the main answer-book.
4. The MCQ question paper will be supplied after the completion of the descriptive examination.

BCM 4C 04—QUANTITATIVE TECHNIQUES FOR BUSINESS

(Multiple Choice Questions for SDE Candidates)

1. The techniques which provide the decision maker a systematic and powerful means of analysis to explore policies for achieving predetermined goals are called _____.
(A) Mathematical techniques. (B) Correlation technique.
(C) Quantitative techniques. (D) None of the above.
2. _____ is an operation research technique which resembles a real life situation.
(A) Decision theory. (B) Simulation.
(C) Game theory. (D) Queuing theory.
3. When the amount of change in one variable leads to a constant ratio of change in another variable correlation is said to be _____.
(A) Positive. (B) Negative.
(C) Linear. (D) Non linear.
4. _____ attempts to determine the degree of relationship between the variable.
(A) Correlation analysis. (B) Regression analysis.
(C) Probability. (D) None of these.
5. The square of co-efficient of correlation is called _____.
(A) Co-efficient of regression. (B) Co-efficient of determination.
(C) Co-efficient of non-determination. (D) Co-efficient of alienation.
6. _____ is the study of correlation between one dependent variable with one independent variable by keeping the other independent variables as constant.
(A) Multiple correlation. (B) Simple correlation.
(C) Partial correlation. (D) None of the above.

7. Scatter diagram of the various values of (X, Y) gives the idea about _____.
(A) Regression model. (B) Distribution of errors.
(C) Functional relationship. (D) None of the above.
8. The term regression was used firstly by :
(A) Prof. Karl Pearson. (B) Edward Spearman.
(C) Francis Galton. (D) None of these.
9. The numerical value given to the likelihood of the occurrence of an event is called _____.
(A) Correlation. (B) Regression.
(C) Probability. (D) None of these.
10. Sample point is also called _____.
(A) Sample space. (B) Elementary outcome.
(C) Event. (D) None of these.
11. A set which contains no element is called :
(A) Null set. (B) Infinite set.
(C) Finite set. (D) None of these.
12. Binomial distribution is also called _____.
(A) Pearsonian distribution. (B) Bernoulli distribution.
(C) Continuous distribution. (D) None of these.
13. Binomial distribution is a _____ probability distribution.
(A) Discrete. (B) Normal.
(C) Continuous distribution. (D) None of these.
14. Random variable is also called :
(A) Stochastic variable. (B) Chance variable.
(C) Both. (D) None.

Turn over

15. If the random variable of a probability distribution assumes any value in a given interval, then it is called _____.
(A) Discrete probability distribution. (B) Continuous probability distribution.
(C) Probability distribution. (D) None of these.
16. For a binomial distribution with probability p of a success and of q of a failure, the relation between mean and variance is _____.
(A) Mean is less than variance.
(B) Mean is greater than variance.
(C) Mean is equal to variance.
(D) Mean is greater than or equal to variance.
17. If two independent random variables follow binomial distribution, their sum follow _____.
(A) Binomial distribution. (B) Poisson distribution.
(C) Normal distribution. (D) None of these.
18. When there are only two variables considered, the regression equation obtained is called _____.
(A) Simple. (B) Multiple.
(C) Partial. (D) None.
19. _____ specifies the objective or goal of solving the LPP.
(A) Objective function. (B) Decision variables.
(C) Constraints. (D) Opportunity cost.
20. _____ are the restrictions or limitations imposed on the LPP
(A) Variables. (B) Cost.
(C) Profit. (D) Constraints.