D 140757 **(Pages : 4)** **Name.....**

Reg. No.....

FOURTH SEMESTER (CBCSS—U.G.) DEGREE EXAMINATION
APRIL 2026

B.B.A.

BBA 4C 04—QUANTITATIVE TECHNIQUES FOR BUSINESS

(2019 Syllabus)

Time : Two Hours and a Half Maximum : 80 Marks

Part A

Answer **all** *questions.*

1. Define Quantitative Technique ?
2. What is meant by Time series Analysis ?
3. What is Least Square Method ?
4. What is Correlation Coefficient ?
5. What is meant by Probability ?
6. What is meant by Inverse Probability ?
7. What is a Venn Diagram ?
8. What is meant by regression ?
9. What is meant by Normal distribution ?
10. What is meant by Rank Correlation ?
11. What is meant by Probable Error ?
12. What are Irregular Variations ?
13. What are Complementary events ?
14. What is meant by Base Shifting ?
15. What is correlation Graph ?

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

Turn over

Part B

Answer **all** *questions.*

16. The co-efficient 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 using spearman's rank correlation.

17. State the steps in construction of Consumer Price Index ?

18. Explain, Linear and Non-Linear Correlation ?

19. State the merits and demerits of Pearson's Co-efficient of Correlation ?

20. Two unbiased dice are thrown. Find the probability that :

    Both the dice show the same number

    One die shows 6

    First die shows 3

    Total of the numbers on the dice is 9

    Total of the numbers on the dice is greater than 8

    A sum of 11.

21. Calculate the six-year moving average :

Years :	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Demand : (in tones)	105	120	115	110	100	130	135	160	155	140	145

22. Construct index numbers for 2012 on the basis of the price of 2010 :

Commodities	*Price in* 2010	*Price in* 2012
A	115	130
B	72	89
C	54	75
D	60	72
E	80	105

23. For a Binomial Distribution, mean is 6 and Standard Deviation is $\sqrt{2}$. Find the parameters ?

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

Part C

Answer any **two** *questions.*

24. Give an essay on various classification of correlation ?

25. Find 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

26. 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 I :	3	5	8	4	7	10	2	1	6	9
Judge I :	6	4	9	8	1	2	3	10	5	7

$$R = 1 - \frac{6\sum D^2}{N^2 - N} \quad N = 10.$$

27. Following are the data related with the prices and quantities consumed for 2010 and 2012 :

Commodity	2010		2012	
	Price	*Quantity*	*Price*	*Quantity*
Rice	5	15	7	12
Wheat	4	5	6	4
Sugar	7	4	9	3
Tea	52	2	55	2

Turn over

(a) Laspeyre's method.

(b) Paasche's method.

(c) Bowly's - Dorbish method.

(d) Fisher's method.

(2 × 10 = 20 marks)

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FOURTH SEMESTER (CBCSS—U.G.) DEGREE EXAMINATION
APRIL 2026

B.B.A.

BBA 4C 04—QUANTITATIVE TECHNIQUES FOR BUSINESS

(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.

BBA 4C 04—QUANTITATIVE TECHNIQUES FOR BUSINESS

(Multiple Choice Questions for SDE Candidates)

1. ———— is a powerful device developed over the matrix algebra.

   (A) Integration. (B) Differentiation.

   (C) Determinants. (D) None of these.

2. Correlation analysis is a ———— analysis.

   (A) Univariate analysis. (B) Bivariate analysis.

   (C) Multivariate analysis. (D) Both (B) and (C).

3. 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.

4. Study of correlation between two sets of data only is called ————.

   (A) Partial correlation. (B) Simple correlation.

   (C) Multiple correlation. (D) None of the above.

5. In a correlation analysis, if $r = 0$, then we may say that, there is ————between variables.

   (A) No correlation. (B) Perfect correlation.

   (C) Linear correlation. (D) None of the above.

6. When $r = -1$, we may say that, there is ————.

   (A) Perfect negative correlation. (B) High degree of negative correlation.

   (C) Very poor correlation. (D) No correlation.

7. When two or more independent variables are used to explain/ predict the dependent variable, then it is called ———— regression.

(A) Linear. (B) Multiple.

(C) Scatter diagram. (D) None of these.

8. The arithmetic mean of b_{xy} and b_{yx} is ————.

(A) Equal to one. (B) Greater than r.

(C) Less than r. (D) Greater than or equal to r.

9. The square root of co-efficient of determination is ————.

(A) Co-efficient of correlation. (B) Co-efficient of regression.

(C) Co-efficient of variation. (D) None of these.

10. Dependent variable is also called ————.

(A) Explained variable. (B) Variable.

(C) Explanatory variable. (D) None of these.

11. An event consisting of those elements which are not in the given event is called ————.

(A) Simple event. (B) Derived event.

(C) Complementary event. (D) None of these.

12. An empty set is also known as ————.

(A) Null set. (B) Equal set.

(C) Finite set. (D) Infinite set.

13. If it is known that an event A has occurred, the probability of an event B given A is called ————.

(A) Empirical probability. (B) Conditional probability.

(C) Priori probability. (D) Posterior probability.

14. Binomial distribution is also called ————————.

(A) Pearsonian distribution. (B) Bernoulli distribution.

(C) Continuous distribution (D) None of these.

15. The mean of a binomial distribution is ————————.

(A) np. (B) npq.

(C) Square root of npq. (D) None of these.

16. When probability is revised on the basis of all the available information, it is called ————————.

(A) Priori probability. (B) Posterior probability.

(C) Continuous. (D) None of these.

17. The height of persons in a country is a ———————— random variable.

(A) Discrete. (B) Continuous.

(C) Discrete as well as continuous. (D) Neither discrete nor continuous.

18. 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.

19. Poisson distribution is the limiting form of ————————.

(A) Binomial distribution. (B) Normal distribution.

(C) Poisson. (D) None of these.

20. If two independent random variables follow binomial distribution, their sum follows ————————.

(A) Binomial distribution. (B) Poisson distribution.

(C) Normal distribution. (D) None of these.