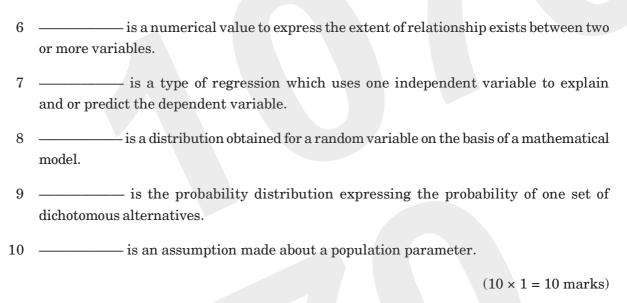
C 21201	(Pages:	4) Name
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FOURTH SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION, APRIL 2022		
	B.Com	
BCM 4C 04—QUANTITATIVE TECHNIQUES FOR BUSINESS		
(2014—2016 Admissions)		
Time: Three Hours		Maximum: 80 Marks
Part A		
Answer all ten questions.		
$Each\ question\ carries\ 1\ mark.$		
I. Choose the correct answer :		
1 Analysis of co-variation	of two or more v	variables is usually called :
(a) Skewness.	(b)	Dispersion.
(c) Central tenden	cy. (d)	Correlation.
$2 ext{ X}^2$ value ranges ———.		
(a) From zero to in	finity. (b)	From – 1 to +1.
(c) From $0 \text{ to } -1$.	(d)	From 0 to +1.
3 When the variables are varying in the same direction, it is called ———.		
(a) Linear correlat	ion. (b)	Simple correlation.
(c) Negative correl	ation. (d)	Positive correlation.
4 An event whose occurrence is inevitable is called:		
(a) Dependent eve	nt. (b)	Independent event.
(c) Uncertain even	t. (d)	Sure event.
5 Which is not a parametric test?		
(a) Z-test.	(b)	T-test.
(c) F-test.	(d)	Chi-square test.

Turn over

2 C 21201

II. Fill in the Blanks:



Part B

Answer any **eight** questions from the following. Each question carries 2 marks.

- 11 What are quantitative techniques?
- 12 List the limitations of quantitative techniques.
- 13 What is meant by perfect positive correlation?
- 14 What are the features of regression coefficients?
- 15 Which are the methods of describing a set?
- 16 Distinguish between equally likely events and mutually exclusive events.
- 17 What are the properties of probability distributions?
- 18 What are the assumptions of binomial distribution?
- 19 What are the uses of standard error?
- 20 Which are the assumptions of Z-test?

 $(8 \times 2 = 16 \text{ marks})$

3 C 21201

Part C

Answer any **six** questions from the following.

Each question carries 4 marks.

- 21 Which are the mathematical techniques used in business decision-making?
- 22 Give the significance of correlation analysis.
- 23 Given:

$$\begin{split} N &= 5 \quad \overline{X} = 20 \ \overline{Y} = 10 \\ \sum \left(X - 20 \right)^2 &= 100 \\ \sum \left(X - 20 \right) \left(Y - 10 \right) = 40. \end{split}$$

Find two regression equations.

- Two unbiased dice are thrown. Find the probability that: (a) Both the dice show the same number; (b) One die shows 6; (c) First die shows 3; (d) Total of the numbers on the dice is 9; (e) Total of the numbers on the dice is greater than 8; and (f) A sum of 11.
- 25 The probability that Sachin Tendulkar scores a century in a cricket match is $\frac{1}{3}$. What is the probability that out of 5 matches, he may score century in :
 - (1) Exactly 2 matches.
 - (2) No match.
- 26 For a binomial distribution, Mean is 6 and Standard Deviation is $\sqrt{2}$. Find the parameters.
- 27 State the procedure for testing of hypothesis.
- 28 What are the uses of Z-test?

 $(6 \times 4 = 24 \text{ marks})$

4 C 21201

Part D

Answer any **two** questions from the following. Each question carries 15 marks.

29 Calculate coefficient of correlation from following data:

- 30 Explain the various theorems of probability.
- 31 Two random sample were drawn from two normal populations and their values are:

A : 66 67 75 76 82 84 88 90 92

B : 64 66 74 78 82 85 87 92 93 95 97

Test whether population standard deviations are equal.

 $(2 \times 15 = 30 \text{ marks})$