

HONOURS + GENERAL

UNDER GRADUATE INTERMEDIATE EXAMINATION, 2020
KISHORE BHARATI BHAGINI NIVEDITA COLLEGE (CO-ED)
BUSINESS MATHEMATICS AND STATISTICS [C-15-G]

FULL MARKS : 100

TIME : 2 hrs.

bsd.year3@gmail.com.

Send your answer pdf in this email-id.

Group - A

5x10 = 50

Answer any ten questions :

1. a) When are two sets A and B said to be disjoint set?
Give example.
- b) For what value of n ; $n P_4 = 12 \times n P_2$?
- c) Find the number of ways in which 12 students may be equally divided into three groups.
- d) Find the GM of 4, 6, 9 with weights 1, 2, 1 respectively.
- e) If A.M. of 7, $(x-2)$, 10, $(x+3)$ is 9, find x .
- f) If $A = \{1, 4\}$, $B = \{4, 5\}$, $C = \{5, 7\}$ find $(A \times B) \cup (A \times C)$
- g) If C.V. = 5% and variance = 4, find the value of mean.
- h) Find the quartile deviation of 22, 17, 25, 20, 29, 27, and 35.
- i) If $Q_1 = 52$, $Q_2 = 92$ and $Q_3 = 152$ find skewness.
- j) State the formula for measuring kurtosis.
- k) If two regression equations are $8x - 10y + 66 = 0$
and $40x - 18y = 214$, find mean of x and y .
- l) If $b_{yx} = -1.8$ and $b_{xy} = -0.2$ find r_{xy} .
- m) Construct the difference table from the following data:
 x : 4 6 8 10 12
 y : 7 10 14 19 26

Group - B

10x5 = 50.

Answer any five questions

2. For any three sets A, B, C prove that
 $A - (B \cap C) = (A - B) \cup (A - C)$

3. In how many ways can the letters of the word DAUGHTER be arranged so that the vowels may never be separated?
4. The A.M. of the following frequency distribution is 46.5. Find the missing frequency of the distribution:

Marks	20-30	30-40	40-50	50-60	60-70
No. of Students	10	20	?	25	15

5. Find the mode of the following distribution:

Marks	20-29	30-39	40-49	50-59	60-69	70-79
No. of Students.	7	16	34	55	28	20.

6. Using appropriate interpolation formula, find the value of y for $x=2$ from the following table:

x :	1	3	5	7	9
y :	3	5	8	12	17

7. Distinguish between skewness and kurtosis. State different measures of them.
8. Compute Standard deviation from the following observations:
61, 52, 37, 89, 64, 28, 93, 65.