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BBABMCN 303

**III Semester B.B.A. Examination, December 2024/January 2025
(NEP 2020) (2022 – 23 Batch Onwards)
STATISTICS FOR BUSINESS DECISIONS**

Time : 2 Hours

Max. Marks : 60

- Instructions :** 1) Show working notes *wherever* necessary.
2) Only simple calculators are **allowed**.

**SECTION – A
(2 Marks Each)**



Answer **any five** of the following.

(5×2=10)

1. What is statistics ?
2. What do you mean by census technique of collection of data ?
3. What is dispersion ?
4. The mean and median of a slightly skewed distribution are 16 cm and 16.7 cm respectively. Find the mode.
5. Write the formula to calculate probable error.
6. In a bivariate data the regression coefficients are -4.0 and -0.02 , find the coefficient of correlation.
7. What is time series ?

**SECTION – B
(5 Marks Each)**

Answer **any four** of the following.

(4×5=20)

8. State the uses of statistics.
9. Draw a blank table for the following :
 - a) Faculty : Arts, Commerce and Science
 - b) Gender : Boys and Girls
 - c) Year : 2023 and 2024.

P.T.O.



10. Present the following data by a Bar Diagram.

Age	18	20	22	24	26
Employed girls	10	15	30	20	25

11. Calculate median from the following data.

Marks	No. of Students
10 – 20	08
20 – 30	20
30 – 40	32
40 – 50	14
50 – 60	10
60 – 70	16



12. Calculate coefficient of skewness from the following data.

X	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60	60 – 70
f	2	10	20	18	10	4

13. The following data relates to price of a commodity.

	Wholesale Price	Retail Price
Arithmetic Mean	Rs. 80	Rs. 110
Standard Deviation	Rs. 4	Rs. 5
Coefficient of correlation	$r = 0.7$	

Estimate retail price when the wholesale price is Rs. 120.

14. Briefly explain the components of time series.



SECTION – C
(10 Marks Each)



Answer any three of the following.

(3x10=30)

15. The following are the runs made by two cricketers in 10 innings.

Innings	1	2	3	4	5	6	7	8	9	10
C-A	31	48	13	51	38	43	50	36	47	82
C-B	51	5	12	83	37	112	42	18	79	20

- a) Who is a better scorer on an average ?
- b) Who is more consistent ?

16. Calculate Karl Pearson's coefficient of correlation between X and Y.

X	Y				
	20 – 30	30 – 40	40 – 50	50 – 60	60 – 70
10 – 15	–	–	–	3	7
15 – 20	–	4	9	4	3
20 – 25	7	6	12	5	–
25 – 30	3	10	19	8	–

17. Fit a straight line trend by the method of least square and estimate the production during the year 2024.

Year	2017	2018	2019	2020	2021	2022	2023
Production ('000)	12	10	14	11	13	15	16

18. Construct Fisher's Ideal Index Number for the following data and show how it satisfies the time reversal test.

Commodity	2022		2023	
	Price	Quantity	Price	Quantity
A	12	20	14	30
B	14	13	20	15
C	10	12	15	20
D	6	8	4	10
E	8	5	6	5