

**TILAK MAHARASHTRA VIDYAPEETH, PUNE**  
**BACHELOR OF BUSINESS ADMINISTRATION (B.B.A.)**  
**EXAMINATION : DECEMBER - 2023**  
**SEMESTER - II**  
**Sub. : Business Statistics (BBA15- 214)**

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**Date :23/12/2023**
**Total Marks : 60**
**Time: 10.00am to 12.30pm**


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- Instructions:** 1) All questions are compulsory.  
2) Figures to the right indicate full marks.

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**Q. 1. Choose the most appropriate option. (05)**

1. If your score in an examination is 86 percentile means only..... candidates have scored more marks than you.
 

a) 14%	b) 86%
c) 70%	d) 100%
  
2. .... Data is data which does not have numerical value
 

a) Qualitative	b) Quantitative
c) theoretical	d) numerical
  
3. If both the regression coefficient are negative the correlation coefficient would be \_\_\_\_\_.
 

a) positive	b) Negative
c) 0	d) 1
  
4. In a symmetrical distribution mean is equal to median is \_\_\_\_\_ to mode.
 

a) equal	b) unequal
c) apposite	d) may be
  
5. Mid point of a class is known as \_\_\_\_\_ mark.
 

a) class marks	b) variables
c) unknown	d) constant

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**Q. 2. State True / False (05)**

1. Two variables are associated if variation in one variable do not affect another variable .
 

a) True	b) False
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2. The conclusions obtained in statistics are universally true.
 

a) True	b) False
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3. The only way to get a census from a population is to make sure the data is collected from every individual in the population.
 

a) True	b) False
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4. The probability of two or more statistically independent events occurring together or in succession is equal to the sum of their marginal probabilities.
 

a) True	b) False
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5. The use of statistics has permeated almost every fact of our life.
 

a) True	b) False
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**Q. 3. Write Short notes on (Any Three)**

**(15)**

1. Use of Probability in Business
2. Reading of Graph
3. Normal Distribution
4. Rank correlation coefficient
5. Interpretation of Coefficient of variation

**Q. 4. Answer in detail (Any Two)**

**(20)**

1. The following are the values of exports of raw cotton (X) and the values of imports of manufactured cotton goods (Y) in Crores of Rs. Compute the coefficient between X and Y.

**Computation of Coefficient of Correlation**

X <sub>i</sub>	42	44	58	55	89	98	66
Y <sub>i</sub>	56	49	53	58	65	76	58

2. From the following distribution of milk co-operative societies according to procurement of milk per day (in liters), compute standard deviation

Quantity of Milk	100-150	150-200	200-250	250-300	300-350
Societies	10	20	35	25	10

3. Calculate the standard deviation & CV from the following distribution:

Number of orders	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39
Number of weeks	3	17	15	20	9	4

**Q. 5. Case study**

**(15)**

A panel of judges A & B graded 7 debtors and independently awarded the following marks –

Participants	1	2	3	4	5	6	7
Mark by A	40	34	28	30	44	38	31
marks by B	32	39	26	30	38	34	28

estimate the equation of line of regression & find the value of y when x=36