## BBA-05

## December - Examination 2019

## BBA Pt. I Examination

## Fundamentals of Business Statistics

## Paper - BBA-05

## Time : 3 Hours ]

[ Max. Marks :- 70
Note: The question paper is divided into three sections A, B and C. Write answers as per given instructions.

Section - A
$7 \times 2=14$

## (Very Short Answer Questions)

Note: Answer all questions. As per the nature of the question delimit your answer in one word, one sentence or maximum upto 30 words. Each question carries 2 marks.

1. i. What do you understand by the term 'Inclusive Series'?
ii. State four limitations of statistics.
iii. Give the meaning of universe.
iv. What do you understand by ‘One Dimensional Diagram'?
v. Explain any two differences between 'Dispersion and Skewness'.
vi. Name the methods of measuring seasonal variations.
vii. Find the values of ${ }^{8} P_{2}$ and ${ }^{4} P_{4}$.

## (Short Answer Questions)

Note: Answer any four questions. Each answer should not exceed 200 words. Each question carries 7 marks.
2. What is a 'Questionnaire'? What is the difference between questionnaire and schedule? What are the chief requirements of a good questionnaire?
3. What is meant by 'Dispersion'? Describe with examples the "methods of limits" for measuring dispersion.
4. Calculate Median and Mode from the following data:

| Classes | Frequency |
| :---: | :---: |
| $0-10$ | 15 |
| $10-20$ | 20 |
| $20-30$ | 25 |
| $30-40$ | 24 |
| $40-50$ | 12 |
| $50-60$ | 31 |
| $60-70$ | 71 |
| $70-80$ | 52 |

5. What is correlation? How will you measure correlation by Karl Pearson's method? Explain.
6. What do you understand by the term 'Probability'? State the addition and multiplication theorems of probability.
7. Construct Fisher's Ideal Index Number from the following data:

| Commodity | Base Year |  | Current Year |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Price | Quantity | Price | Quantity |
| A | 8 | 50 | 12 | 40 |
| B | 4 | 30 | 8 | 20 |
| C | 10 | 25 | 12 | 40 |
| D | 5 | 50 | 4 | 100 |

8. What are the objects of classification of data? Explain with example the method of forming classes with the help of mid-values.
9. Write short notes on following:
a. Central moments
b. Kurtosis:- Types of curves

## Section-C

$2 \times 14=28$
(Long Answer Questions)
Note: Answer any two questions. You have to delimit your each answer maximum upto 500 words. Each question carries 14 marks.
10. Calculate Karl Pearson's coefficient of Skewness from the following data:

| Marks | No. of students |
| :---: | :---: |
| $0-10$ | 06 |
| $10-20$ | 12 |
| $20-30$ | 15 |
| $30-40$ | 30 |
| $40-50$ | 20 |
| $50-60$ | 04 |

11. Write explanatory notes on the following (Any two):
a. Langrange's method of interpolation
b. Yule's coefficient of association of attributes.
c. Arithmetic mean.
d. Ogive curve.
12. What is time series? What are its main components? How would you determine trend in a time series.
13. Obtain two regression equations from the following information and find out the value of $Y$ when $X=20$ and the value of $X$ when $Y=25$.

| $X$ | $Y$ |
| :---: | :---: |
| 12 | 16 |
| 14 | 20 |
| 18 | 26 |
| 22 | 30 |
| 24 | 32 |

