

**Code : 302304**

**BBA 3rd Semester Theory Examination, 2017**

**Business Mathematics and Statistics-2**

Time : 3 Hrs

Full Marks : 60

**Instructions :**

- (i) The questions are of equal value.
- (ii) There are Seven questions in this Paper.
- (iii) Attempt Five questions in all.
- (iii) Question Nos. 1 & 2 are compulsory.

**1. Choose correct answers (any six of the following):**

- (a) The mean of a distribution is 14 and the standard deviation is 5. What is the value of the coefficient of variation?
  - (i) 60.4%
  - (ii) 48.3%
  - (iii) 35.7%
  - (iv) 27.8%
- (b) The mean of a distribution is 23, the median is 24, and the mode is 25.5. It is most likely that this distribution is:
  - (i) Positively Skewed
  - (ii) Symmetrical
  - (iii) Asymptotic
  - (iv) Negatively Skewed
- (c) Which of the following describe the middle part of a group of numbers?
  - (i) Measure of Variability
  - (ii) Measure of Central Tendency

P.T.O.

- (iii) Measure of Association
- (iv) Measure of Shape
- (d) According to the empirical rule, approximately what percent of the data should lie within  $\mu \pm 2\sigma$  ?
  - (i) 75%
  - (ii) 68%
  - (iii) 99.7%
  - (iv) 90%
  - (v) 95%
- (e) The sum of the deviations about the mean is always:
  - (i) Range
  - (ii) Zero
  - (iii) Total Standard Deviation
  - (iv) Positive
  - (v) Negative
- (f) The middle value of an ordered array of numbers is the
  - (i) Mode
  - (ii) Mean
  - (iii) Median
  - (iv) Midpoint
- (g) Which of the following is not a measure of central tendency?
  - (i) Percentile
  - (ii) Quartile
  - (iii) Standard deviation
  - (iv) Mode
- (h) Which of the following divides a group of data into four subgroups?

- (i) Percentiles
- (ii) Deciles
- (iii) Median
- (iv) Quartiles
- (v) Standard Deviation

(i) If the standard deviation of a population is 9, the population variance is:

- (i) 9
- (ii) 3
- (iii) 21
- (iv) 81

(j) If a distribution is abnormally tall and peaked, then it can be said that the distribution is:

- (i) leptokurtic
- (ii) pyrokurtic
- (iii) platykurtic
- (iv) mesokurtic

2. Answer briefly any three.

- (a) Define normal probability distribution.
- (b) Define Mutually Exclusive events.
- (c) State the three axioms of probability?
- (d) Define the relation between regression and correlation.
- (e) Define Baye's Theorem.

Answer any three of the following:

3. Define Poisson distribution.

Code : 302304

3

P.T.O.

4. Define regression analysis. How does it differ from correlation analysis.

5. Draw Ogive curves for the following data and find out median

Class	Frequency
0 - 5	6
5-10	10
10-15	4
15-20	12
20-25	8
25-30	2

6. Discuss the quantitative classification of data.

7. (a) Define different method of measuring co-efficient of skewness.

(b) Compute Karl Pearson's co-efficient of skewness for the following distribution

Class	f
5-15	10
15-25	20
25-35	30
35-45	40
45-55	50
55-65	60
65-75	70
75-85	80

\*\*\*

Code : 302304

4