

Roll No.

57516

**B.B.A. 2nd Semester
(N.S.) 2014-17**

Examination-May, 2015

Business Statistics

Paper-BBAN-206

Time : 3 hours

Max. Marks : 80

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard will be entertained after the examination.

Note : Section-A is compulsory. From Section-B, attempt **four** questions (**one** question from each unit). All questions carry equal marks.

Section-A

1. (a) Discuss the objectives of classification.
- (b) Taking a hypothetical example, construct a histogram.

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(1)

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- (c) Find the harmonic mean of 11 and 19.
- (d) What are the merits, demerits and applications of range ?
- (e) What is partial correlation ?
- (f) Discuss the characteristics of rank correlation.
- (g) If $r_{xy} = 0.5$ and $b_{xy} = 0.40$, find the value of b_{yx} .
- (h) Explain and illustrate irregular movements.

Section-B

Unit-I

2. Discuss the characteristics and scope of statistics.
3. In 1995, out of total 1,950 workers in a factory, 1200 were members of trade union. Number of women workers were 300 out of which 175 were not members of the trade union. In 2000, number of union members

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(2)

increased to 2100 of which 1490 were men while the number of non-union members was reduced to 308 of which 180 were men. Present the above information in tabular form with suitable captions.

Unit-II

- 4. Discuss the merits, demerits and applications of arithmetic mean, median and mode.
- 5. Find Karl Pearson's co-efficient of skewness for the following distribution :

| | | | | | |
|----------|---------|---------|---------|---------|---------|
| X | 0-50 | 50-100 | 100-150 | 150-200 | 200-250 |
| F | 20 | 26 | 44 | 60 | 101 |
| X | 250-300 | 300-350 | 350-400 | 400-450 | |
| F | 109 | 84 | 66 | 10 | |

Unit-III

- 6. Explain the meaning, significance and types of correlation. Does correlation always show cause and effect relationship ?

- 7. Obtain the two regression lines for the following series :

| | | | | | | | | | | |
|----------|----|----|-----|-----|----|-----|----|----|-----|----|
| X | 91 | 97 | 108 | 121 | 67 | 124 | 51 | 73 | 111 | 57 |
| Y | 71 | 75 | 69 | 97 | 70 | 91 | 39 | 61 | 80 | 47 |

Also estimate the value of:

- (i) X if Y = 80
- (ii) Y if X = 110

Unit-IV

- 8. Find the trend values, by taking 3-years moving average period for the following time series :

| | | | | | | |
|----------------------------|------|------|------|------|------|------|
| Year | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 |
| Output (000' units) | 40 | 33 | 52 | 61 | 76 | 68 |
| Year | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 |
| Output (000' units) | 91 | 87 | 98 | 94 | 102 | 110 |

- 9. Explain the meaning and utility of index numbers. Which problems are faced in constructing them ?