# BUSINESS STATISTICS 

MAY-JUNE : 2015
(Course -108)
Time : 3 Hours] [Maximum Marks : 90 [Minimum Pass Marks : 32
Note : Attempt all the five questions. All questions carry equal marks.
Unit-I

1. (a) Explain the meaning and scope of statistics bringing out its importance in the field of business.
(b) What do you mean by Data? What are its objectives? Explain different kinds of classification of data. http://www.prsunotes.com
(c) Draw a histogram to represent the following frequency distribution.

| Marks | No. of Students |
| :--- | :--- |
| $0-10$ | 4 |
| $10-20$ | 6 |
| $20-40$ | 14 |
| $40-50$ | 16 |
| $50-60$ | 14 |
| $60-70$ | 10 |
| $70-90$ | 16 |
| $90-100$ | 5 |

## Unit-II

2. (a) What do you mean by arithmetic mean? Discuss its merits and demerits. Also state its importance properties. http://www.prsunotes.com
(b) An incomplete distribution is given below :

| Class | Frequency |
| :--- | :--- |
| $0-10$ | 10 |
| $10-20$ | 20 |
| $20-30$ | $?$ |
| $30-40$ | 40 |
| $40-50$ | $?$ |
| $50-60$ | 25 |
| $60-70$ | 15 |
|  | $\underline{170}$ |

Find out the missing frequencies if median value is 35 .
(c) Calculate mode from the following :
http://www.prsunotes.com
Marks
No. of Students
0-10
2

| $10-20$ | 7 |
| :--- | :--- |
| $20-40$ | 18 |
| $40-50$ | 15 |
| $50-70$ | 8 |

## Unit-III

3 (a) What do you mean by mean deviation ? How is it differ from standard deviation?
(b) For a certain distribution, the arithmetic mean is 45 , median is 48 and Karl Pearson's coefficient of skewness is 0.4 .

Calculate :
(i) the mode
(ii) the standard deviation
(iii) the coefficient of variation
(c) Calculate the standard deviation from the following marks obtained by 5 students in a tutorial group :

Marks obtained : 8,12,13,15, 22

## Unit-IV

4. (a) Define correlation. Explain different types of correlation with suitable examples.
(b) From the following data calculate Karl Pearson's coefficient of correlation :

| X | Y |  |
| :--- | :--- | :--- |
| 6 | 9 | http://www.prsunotes.com |
| 2 | 11 |  |
| 10 | 5 |  |
| 4 | 8 |  |
| 8 | 7 |  |

(c) Define Karl Pearson's coefficient of correction. What is it intended to measure?

Unit-V
5. (a) What is an Index Number? Explain the various types of index numbers.
(b) What is meant by time series? State the different components of the time series.
(c) From the following data calculate price index number by Fisher's formula (with 2006 as a base) :

|  |  | 2006 |  | 2007 |
| :--- | :--- | :--- | :--- | :--- |
| Commodity Price | Quantity | Price | Quantity |  |
| A | 10 | 100 | 12 | 150 |
| B | 8 | 80 | 10 | 100 |
| C | 5 | 60 | 10 | 72 |
| D | 24 | 30 | 18 | 33 |
|  | http://www.prsunotes.com |  |  |  |

