

**E-307**

**Total No. of Pages :3**

<b>Seat No.</b>	
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**B.B.A. (Part - II) (Semester - III)**  
**Examination, November - 2016**  
**STATISTICAL TECHNIQUES FOR BUSINESS (Paper - I)**  
**Sub. Code : 43940**

**Day and Date : Thursday, 03-11-2016**  
**Time : 12.00 noon to 2.00 p.m.**

**Total Marks : 40**

- Instructions :**
- 1) All questions are compulsory.
  - 2) Figures to the right indicate full marks.
  - 3) Use of nonprogrammable calculator is allowed.
  - 4) Graph paper will be supplied on request.

**Q1) Attempt any Two:**

**[14]**

- a) Define statistics. Explain scope of statistics.
- b) For the data given below, find combined variance and combined C.V. of two factories A and B together.

	Factory A	Factory B
No. of Employees	50	100
Average wage	Rs. 120	Rs. 85
Variance	Rs. 9	Rs. 16

- c) Define spearman's rank correlation coefficient. Find rank correlation coefficient from the following data and comment on your result.

X	51	34	50	56	50
Y	34	50	42	50	55

**P.T.O.**

**Q2) Attempt Any Two:**

- a) State the relation between correlation coefficient and regression coefficients and verify them by using following data:

X	2	3	4	7	6
Y	10	7	3	1	2

- b) Define Histogram and explain in short its construction. Draw a Histogram from the data given below and locate mode from it.

Class	5 - 15	15 - 25	25 - 35	35 - 45	45 - 55	55 - 65
Frequency	3	8	15	20	10	4

- c) Define mean. State merits and demerits of mean. Calculate mean and median for the following data.

Wage in Rs	5 - 8	9 - 12	13 - 16	17 - 20	21 - 24	25 - 28	29 - 32
No.of workers	5	14	17	10	1	0	2

- d) Define mean Deviation (M.D.) about mean. Find M.D. about median and its coefficient for the following data.

Value	10	11	12	13	14
Frequency	3	12	18	12	4

**Q3) Attempt any Two:**

- a) The equations of two regression lines are  $4x - 5y + 33 = 0$ ,  
 $20x - 9y - 107 = 0$ . Find
- Mean of  $x$  and  $y$ .
  - Correlation coefficient between  $x$  and  $y$ .
- b) State the empirical relation between mean, median and mode. Find the value of mode of the distribution whose mean is 26.8 and median is 27.6. Also show that the median lie between mean and mode.
- c) Define S.D. Calculate S.D. of marks obtained by 10 students in a test as 8, 9, 15, 23, 5, 11, 19, 8, 10, 12.

