

Seat No.	
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**B.B.A. (Part - II) (Semester - IV) Examination, April - 2015**  
**STATISTICAL TECHNIQUES FOR BUSINESS (Paper - II)**

**Sub. Code: 43947**

**Day and Date : Tuesday, 28-04-2015**

**Total Marks : 50**

**Time : 12.00 noon to 02.00 p.m.**

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

**Q1) Attempt any two :**

**[16]**

- a) What is S.Q.C.? Explain the construction of control chart.
- b) Define the terms (i) price index number (ii) value index number. Calculate value index number from the following data.

Commodity	Price		Quantity	
	Base year	Current year	Base year	Current year
A	20	40	8	6
B	50	60	10	5
C	40	50	15	15
D	20	20	20	25

- c) Define : Sample space and mutually exclusive events. Give an example of each. A die is thrown, find the probability of getting (i) an odd number (ii) a number which is perfect square.

**Q2) Attempt any two :**

**[20]**

- a) Define time series. State its components. Calculate h-yearly centered moving averages for the following data.

Year	1	2	3	4	5	6	7	8	9	10
Production	75	74	73	72	76	76	80	75	76	72

**P.T.O.**

- b) Define Laspeyre's and Paasche's price indices. Find Fisher's price index number from the data given below.

Article	Base year		Current year	
	Price in Rs.	Quantity in kgs.	Price in Rs.	Quantity in kgs.
A	5	10	4	12
B	8	6	7	7
C	6	3	5	4

- c) Explain the terms chance causes and assignable causes of variation. An examination of 10 new computers revealed the following number of defects per computer.

8, 5, 6, 4, 3, 8, 8, 10, 9, 9

Draw a suitable control chart and state your conclusion.

- d) State multiplication law of probability for any two events. A problem in statistics is given to two students A and B. Probability that A solves it is  $\frac{2}{3}$  and that B solves it is  $\frac{3}{4}$ . Find the probability that the problem will be solved.

Q3) Attempt any two :

[14]

- a) What is index number? State the problems (any four) in construction of index number.  
Laspeyre's and Fisher's price indices respectively are 125 and 125.6. Obtain Paasche's price index number.
- b) State the uses of time series. Explain the method of moving averages in time series.
- c) Define probability of an event. A card is drawn from a pack of cards, find the probability that the card drawn will be red card or picture card.

