

Seat No.	
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**B.B.A. (Part - II) (Semester - IV) Examination, Dec. - 2013**  
**STATISTICAL TECHNIQUES FOR BUSINESS (Paper - II)**  
**Sub. Code : 43947**

Day and Date : Saturday, 07 - 12 - 2013

Total Marks : 40

Time : 3.00 p.m. to 5.00 p.m.

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

**Q1) Attempt any two :****[14]**

- a) Explain Price Index Number by average of relative method. Find price Index Number by simple aggregate method.

Commodity	A	B	C	D
Price in 2009 (in Rs.)	162	256	257	132
Price in 2011 (in Rs.)	171	164	189	145

- b) Explain the construction of mean chart.  
c) Define : Event and probability of an event.

If  $P(A) = 0.3$ ,  $P(B) = 0.6$  and A, B are independent events, find the probability that atleast one of them will happen.

**Q2) Attempt any two :****[16]**

- a) State the formula for Fisher's quantity index number. Calculate Fisher's price index number from the following data.

Commodity	Base Year		Current Year	
	Price in Rs.	Value in Rs.	Price in Rs.	Value in Rs.
A	5	50	4	48
B	8	48	7	49
C	6	18	5	20

Comment on your result.

**P.T.O.**

- b) Define Time Series and state its components.  
Determine the trend values by 5 yearly moving averages from the following data.

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Value	100	105	115	95	90	97	80	65	75	70

- c) Define S.Q.C and state its advantages.

From the following data construct  $\bar{X}$  - chart and give conclusion.

Sample No.	1	2	3	4	5	6	7	8	9	10
Mean	11.2	11.8	10.8	11.6	11.0	9.6	10.4	9.6	10.6	10.0
Range	7	4	8	5	7	4	8	4	7	9

For  $n = 5$ ,  $A_2 = 0.58$ .

- d) State the addition law of probability for any two events. A card is drawn from pack of 52 cards. Find the probability of getting either spade card or an ace card.

**Q3)** Attempt any two :

**[10]**

- a) Explain the determination of trend values by moving Average Method.  
b) Define value based index number and find same from the following data.

Commodity	A	B	C	D
Base year value	80	75	60	50
Current year value	120	72	60	80

- c) What is the chance that a leap year selected at random will contain 53 sundays?

