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B.B.A. (Part - II) (Semester - IV) Examination, May- 2016

STATISTICAL TECHNIQUES FOR BUSINESS (Paper - II)

Sub. Code : 43947

Day and Date : Saturday, 07 - 05 - 2016 **Total Marks : 40**

Time : 12.00 noon to 02.00 p.m.

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

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

a) Define the terms : Event and probability of an event.

If $P(A) = 0.2$, $P(B) = 0.6$, find $P(A \cup B)$, when

i) A and B are independent.

ii) A and B are exclusive.

b) What is relation between Laspeyre's Paasche's and Fisher's Quantity index numbers. Paasche's and Fisher's price indices respectively are 124 and 124.8. Find Laspeyre's price index number.

c) Describe the method of moving averages related to time series.

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

a) Define index number and state its uses.

Compute Fisher's price index number and value index number from following data.

Article	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

P.T.O.

b) Define Time series and state its components. Calculate 4-yearly centered moving averages from the following data.

Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production	82	73	75	74	73	72	76	76	80	75

c) State addition law of probability for any two events. A bag contains 20 tickets marked with numbers 1 to 20. One ticket is drawn at random, find the probability that it will be multiple of 4 or divisible by 5.

d) Explain construction of control chart for number of defects. Ten pieces of cloth out of different rolls of equal length contain the following number of defects.

1, 3, 5, 0, 6, 0, 9, 4, 4, 3

Draw an appropriate control chart and state your conclusion.

Q3) Attempt any Two: **[10]**

a) What is the probability of getting exactly 5 sundays in a month of December?

b) State the problems in construction of an index numbers.

c) What is Statistical Quality Control (S.Q.C.). State the limits for mean chart.