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Total No. of Pages : 03

Total No. of Questions : 09

BBA (2012 & Onward Batches)
BRDM/Bachelor in Service Industry Management (SIM) (2014 & Onwards)
(Sem.-4)

BUSINESS STATISTICS

Subject Code : BBA-304

Paper ID : [C1167]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY** consisting of TEN questions carrying TWO marks each.
2. **SECTIONS-B** consists of FOUR Sub-sections : Units-I, II, III & IV.
3. Each Sub-section contains TWO questions each, carrying TEN marks each.
4. Student has to attempt any ONE question from each Sub-section.

SECTION-A

1 Write briefly :

- a) Primary Data.
- b) Frequency Curve.
- c) Properties of Mean.
- d) Linear & Non linear Correlation.
- e) Absolute Measures of Dispersion.
- f) Properties of an ideal Index Number.
- g) Mutually Exclusive & Exhaustive Events.
- h) Multiplicative Theorem.
- i) Find mode, if mean =15, median = 18.
- j) Find Coefficient of Variation, if Mean = 30, Standard Deviation = 6.

SECTION-B

UNIT-I

2. From the data given below, find out the missing frequency when Mean is 33.

X :	5	15	25	35	45	55
Y :	5	10	25	30	?	10

Also find median of the above series.

3. Find MD & its Coefficient from the following :

X :	-3000 to -2000	-2000 to -1000	-1000 to 0	0 to 1000	1000 to 2000
F :	10	8	6	4	5

X :	2000 to 3000	3000 to 4000	4000 to 5000	5000 to 6000
F :	10	30	15	10

UNIT-II

4. Compute Karl-Pearson's Co- efficient of correlation for the following data :

X :	45	55	56	58	60	65	68	70	75	80
Y :	56	50	48	60	62	64	65	70	74	82

5. In a partially destroyed laboratory record of an analysis of regression data the following results are only legible.

Variance of $X = 9$

Regression equations: $8X - 10Y + 66 = 0$

$$40X - 18Y = 214$$

From the above equations and information :

Calculate

- (a) the mean values of X & Y
- (b) Coefficient of Correlation between X & Y
- (c) Standard Deviation of Y .

UNIT-III

6. Below are given the production figures (in thousand quintals) of a sugar factory. Fit a straight line trend & plot the figure on graph.

Year :	2001	2002	2003	2004	2005	2006	2007
Production (in '000 Qntl) :	80	90	92	83	94	99	92

- (a) Estimate the production in year 2010
- (b) What is the monthly increase in production?
7. Prepare the Index Numbers for three years with an average prices as base: Rate per Rupee (in Kg)

	Commodities		
Year	Wheat	Cotton	Oil
I	4	2	2
II	3	1.5	1.25
III	2.5	1	0.75

UNIT-IV

8. What do you mean by the term Probability? Explain various approaches to the Theory of Probability.
9. (a) A bag contains 3 white, 4 black and 5 red balls. Three balls are drawn one by one without replacement, what is the probability they are white, red and black.
- (b) A factory has two machines. Machine 1 and machine 2 are producing 30% and 70% of the total production of the factory. Five percent and ten percent of Machine 1 and machine 2's production is defective. A piece is selected and found to be defective, what is the probability that it is produced by machine 1.