Unit-III

6. (a) Explain the classical and statistical approach of probability. 5

   (b) Discuss Addition and Multiplication theorems with examples. 5

7. A bag contains 4 red and 6 white balls, Two draws are made without replacement. What is the probability that both the balls are

   (a) Red 10

   (b) White

   (c) Of the same colour

   (d) Of different colours

Unit-IV

8. Explain the following methods with hypothetical examples : 5+5

   (a) Semi Average method

   (b) Moving Average method

9. Fit a straight line trend by the least squares method. 10

Year	2005	2006	2007	2008	2009
Production (In'000')	12	18	20	23	27

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Roll No. _____

MS-3165

B.B.A. (Semester-II) Examination, 2015

BUSINESS STATISTICS

(BBA-202)

Time Allowed : Three Hours] [Maximum Marks : 70

Note : Answer five questions in all. Question No.1 is compulsory. Select one question from each Unit. Use of simple calculator is allowed.

1. Answer the following : 3×10=30

   (a) Which measure of dispersion is more scientific and most popular?

   (b) Discuss the demerits of range?

   (c) What are unequal class intervals?

   (d) What are the properties of an ideal average?

   (e) "Time-series is extremely useful in business decision making." Discuss.

(f) Differentiate between 'Correlation' and 'Regression'.

(g) If the mean and standard deviation of series of 100 values are 50 and 4 respectively, find the sum of item values and the sum of squares of item values.

(h) What is the chance of drawing either a heart or a king in a draw from a pack of 52 cards?

(i) What is the probability of getting all the heads in four throws of a coin?

(j) If the two regression coefficients are 1.5 and 0.5 respectively, what will be the value of coefficient of correlation.

Unit-I

2. Calculate quartile deviation from the information given below : 10

C-I	Frequency
10-20	15
20-30	14
30-40	16
40-50	20
50-60	15
60-70	11
70-80	9

3. Calculate coefficient of variation from the information given below : 10

Age Group (less than)	10	20	30	40	50	60	70
Population (in'000)	10	26	51	81	107	120	125

Unit-II

4. (a) Calculate the coefficient of correlation from the following data using Karl Pearson's method : 7+3

Income	48	35	17	23	47
Expenditure	45	20	40	25	45

(b) From the values given below calculate coefficient of correlation : 7+3

(i) $\Sigma dndy = 150$ (ii) $N=9$

(iii) $\delta_n = 5.8$ (iv) $\delta_y = 3.2$

5. Find out from the following : 10

(a) Two Regression coefficients

(b) Two Regression equations

(c) Coefficient of correlation

(d) Most likely value of y, when x is 34

(e) Most likely value of x, when y is 47,

$\overline{x} = 30, \overline{y} = 40, s_x = 5, s_y = 7, \gamma_{xy} = 0.75$