commodity in two cities: 10

Price in City A	Price in City B
20	10
22	20
19	18
23	12
16	15

Using appropriate statistical tools, find the city which had more stable prices.

Unit-II

4. From the following data, examine whether input of oil and output of electricity can be said to be correlated: 10

Input of oil	Output of Electricity
6.9	1.9
8.2	3.5
7.8	6.5
4.8	1.3
9.6	5.5
8.0	3.5
7.7	2.2

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Roll No. _____

CH-2/2825

B. Com. (Hons.) (Semester-II)

Examination, 2015

COMMERCE

(Business Statistics)

(BCH-205)

Time Allowed : Three Hours] *[Maximum Marks : 70*

Note : Answer **five** questions in all. Question **No. 1** is **compulsory** and carries 30 marks. Select one question from each Unit. All of them carry 10 marks each. Use of simple calculator is permitted.

1. Attempt **all** the parts: 3×10=30

(a) The value of Mode and Median for a moderately skewed distribution are 64.2 and 68.6 respectively. Find arithmatic Mean.

(b) The Mean weight of 150 students in a

class is 60 kg. The mean weight of boys in the class is 70 kg and that of girls is 55 kg. Find the number of girls in the class.

(c) The Mean of a binomial distribution is 20 and standard deviation is 4. Find out n, p and q.

(d) A boy contains four yellow and ten white balls. Two balls are drawn at random. What is the probability that of these two balls, one is white and the other yellow?

(e) Find the means of x and y from the following equations:

$2y - x = 50$

$3y - 2x = 10$

(f) Discuss the characteristics of Statistics as data in brief.

(g) Distinguish between positive and negative correlation with illustration.

(h) Briefly explain the importance of time series analysis in business forecasting.

(i) "An index number is a special type of average." Elaborate on the statement.

(j) Discuss addition theorem with examples.

Unit-I

2. Compute Mean deviation from Median from the data given below: 10

Marks Below	No. of Students
10	15
20	35
30	60
40	84
50	96
60	127
70	198
80	250

3. Following are the data relating to prices of a

5. You are given below the information of a firm about Advertisement and sales for a specific period: 10

	Advertisment Expenditure (Rs. in Crore)	Sales (Rs. in Crore)
Mean	10	90
Standard deviation	3	12

Coefficient of correlation = +0.8

(a) Find the two regression lines.

(b) Find the likely sales when advertisement expenditure is Rs. 15 Crore.

(c) What should be advertisment expenditure if the company wants to attain sales target of Rs. 20 Crores?

Unit-III

6. An Urn contains five red balls and seven green balls. Three balls are drawn twice without replacement, find the probability that the first

draw gives three red balls and the second draw three green balls. 10

7. Two cards are drawn from a pack of cards at random. What is the probability that it will be: 10

(i) A diamond and a heart

(ii) A king and a queen

(iii) Two kings

Unit-IV

8. For the following table fit a straight line trend by the method of least square method and also find the trend values : 10

Year	Production
2001	12
2002	10
2003	14
2004	11
2005	13
2006	15
2007	16

9. You are given the following figures: 10

Commodity	2006		2008	
	Price	Quantity	Price	Quantity
A	6	50	10	560
B	2	100	2	240
C	4	60	6	360
D	10	30	12	288
E	8	40	12	432

Construct Fisher's Ideal Index number and prove that this index number satisfies both the reversibility tests.