DE–8280 **23**

DISTANCE EDUCATION

B.C.S. DEGREE EXAMINATION, MAY 2010.

BUSINESS STATISTICS

Time : Three hours Maximum : 100 marks

PART A — (5 × 8 = 40 marks)

Answer any FIVE questions.

1. What are the essential qualities of a good questionnaire?

2. Enumerate the important methods of collecting secondary data.

3. Define tabulation. What are the features of classification?

4. Briefly explain the different measures of central tendency.

5. Find out arithmetic mean of the following data :

Marks	0–15	16–30	31–45	46–60	61–75	76–90
No. of students	4	7	12	9	6	2

6. Compute Harmonic mean of the following data :

Marks	0–20	20–40	40–60	60–80	80–100
No. of students :	4	5	12	8	6

7. Calculate 8th decile and 65^{th} percentile from the following distribution :

x :	12	18	24	30	36	42	48	54
f :	3	5	7	12	13	6	5	4

8. From the following prices, calculate Index numbers with 2001 as base :

Year :	1994	1995	1996	1997	1998	1999	2000	2001	2002
Price (Rs)	4	5	6	9	11	7	13	14	9

PART B — (4 × 15 = 60 marks)

Answer any FOUR questions.

9. Discuss the role of sampling in statistics.

10. Explain the different test of consistency of index numbers.

11. Explain the graphical method of locating the mode.

12. Calculate standard deviation and co-efficient of variation from the data given below :

x:	0–5	5–10	10–15	15–20	20–25	25–30	30–35	35–40
f:	14	26	32	45	39	12	9	2

13. Compute mode from the following data :

Average monthly sales (Rs. in '000)	Less than 20	<30	<40	<50	<60	<70	<80	<90	<100
No. of factories	7	15	22	30	42	53	59	70	80

14. Calculate Karl Pearson's co-efficient of correlation from the following data :

Income (Rs) :	230	560	490	360	270	480	580	600
Expenses (Rs) :	200	440	350	250	240	300	420	550

15. Calculate the regression equations X on Y and Y on X from the following data :

X:	8	7	10	9	6
Y:	15	18	17	21	14

Compute

(a) The value of Y for a given value of X as 21.

(b) The value of X when the value of Y is 30.

1.