

S.D.E.

**B.C.A. (2004 COURSE SEM- IV : WINTER - 2017**  
**SUBJECT : COMPUTER ORIENTED STATISTICAL METHODS**

Day : **Thursday**  
Date : **28/12/2017**

**W-2017-4170**

Time : **02.00 PM TO 05.00 PM**  
Max. Marks : 80

**N.B.:**

- 1) Attempt **ANY FIVE** questions from Section – I. Each question carries **10** marks.
- 2) Attempt **ANY TWO** questions from Section – II. Each question carries **15** marks.
- 3) Answers to both the sections should be written in **SEPARATE** answer books.
- 4) Use of non-programmable **CALCULATOR** is allowed.

**SECTION – I**

**Q.1** Define ‘Statistics’. Discuss its scope in Industry and Economics.

**Q.2** Draw cumulative frequency curves for the following frequency distribution:

Monthly pocket money (in \$)	0 – 5	5 – 10	10 – 15	15 – 20	20 – 25
No. of Students	6	20	30	12	8

**Q.3** Compute the value of median for the following data. Also find the arithmetic mean.

C. I.	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60	60 – 70
Frequency	12	18	27	20	17	12	6

**Q.4** For the variable X and Y given below, compute the value of Karl Pearson correlation coefficient.

X	9	8	7	6	5	4	3	2	1	6
Y	15	16	14	13	11	12	10	8	9	7

**Q.5** Obtain two regression equations for the following data:

X	35	20	18	25	27	38	12
Y	30	22	29	23	21	40	16

**Q.6** Discuss the advantages of sampling over census.

**Q.7** Write short notes on **ANY TWO** of the following:

- a) Merits and demerits of median and mode
- b) Scatter diagrams
- c) Linear regression model

**P.T.O.**

## SECTION – II

- Q.8** Following figures give the marks of 10 students in a class test. Find the mean, standard deviation and coefficient of variation:  
12, 18, 17, 13, 15, 09, 18, 11, 06, 01.

- Q.9** The weekly observations on cost of living index in a certain city for a year has the following frequency table:

Cost of living index	No. of weeks
140 – 150	5
150 – 160	10
160 – 170	20
170 – 180	9
180 – 190	6
190 – 200	2

- a) Construct cumulative frequency table for the above data.  
b) Represent the above data by a frequency polygon.
- Q.10** What are the commonly used models in Time Series Analysis? Discuss any three of them briefly.

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