BO—18—2016

FACULTY OF COMPUTER STUDIES

B.C.A. (First Year) (Second Semester) EXAMINATION

OCTOBER/NOVEMBER, 2016

(Revised Course)

STATISTICAL TECHNIQUES IN COMPUTER SCIENCE

(Wednesday, 23-11-2016)   Time : 10.00 a.m. to 1.00 p.m.

Time—Three Hours   *Maximum Marks—80*

N.B. :— (*i*)   *All* questions are compulsory.

      (*ii*)   Attempt either (A) *or* (B) from Q. Nos. **2** to **4**.

      (*iii*)   Figures to right indicate full marks.

      (*iv*)   Use of non-programmable calculator is allowed.

      (*v*)   Use suitable data if necessary.

1. Attempt the following :   20

    (*a*)   Explain permutation in detail.

    (*b*)   If mean is 25 and standard deviation is 4, then what is coefficient of variation ?

    (*c*)   Give the merits and demerits of median

    (*d*)   Describe attributes and variables.

2. (A)   Attempt the following :

    (*a*)   Explain frequency and cumulative frequency curve.   7

    (*b*)   One card is drawn from a pack of 52 cards. Then what is the probability that it is either a king or diamond ?   8

Or

(B)   Attempt the following :

    (*c*)   Explain correlation and its types.   7

    (*d*)   Calculate 4 and 5 yearly moving averages from the following :8

Years	Productions
1982	11
1983	16
1984	24

P.T.O.

1985	28
1986	35
1987	42
1988	56
1989	63
1990	72
1991	48
1992	39
1993	25
1994	40
1995	33

3. (A) Attempt the following :

(a) Explain coefficient of variation. 7

(b) Calculate correlation coefficient from the following data : 8

X	Y
5	8
10	14
16	17
25	28
36	30
12	20
18	10

Or

(B) Attempt the following :

(c) Define central tendency and explain its measures. 7

(d) Calculate mean and median from the following data : 8

X	F
10	12
20	18
30	25
40	32
50	16
60	12
70	8
80	4

4. (A) Attempt the following :

(a) Explain histogram and frequency polygon. 7

(b) Calculate standard deviation and variance from the following data : 8

Marks	No. of Students
0—5	34
5—10	56
10—15	82
15—20	95
20—25	46
25—30	30
30—35	20
35—40	10

Or

(B) Attempt the following :

(c) Give the importance of statistics in detail. 7

P.T.O.

(*d*) Calculate mode from the following : 8

Class	Frequency
0—20	8
20—40	13
40—60	17
60—80	25
80—100	18
100—120	16
120—140	12
140—160	10

5. Write short notes on any *three* of the following : 15

(*a*) Scope of statistics

(*b*) Weighted arithmetic mean

(*c*) Types of data

(*d*) Axioms of probability

(*e*) Least square method.