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BP—14—2016

FACULTY OF COMPUTER STUDIES

B.Sc. (First Year) (First Semester) EXAMINATION

NOVEMBER/DECEMBER, 2016

(CBCS Pattern)

SOFTWARE ENGINEERING

(Statistical Techniques in Computer Science)

(Tuesday, 22-11-2016)

Time : 10.00 a.m. to 1.00 p.m.

Time—3 Hours

Maximum Marks—75

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

(ii) Figures to the right indicate full marks.

(iii) Assume suitable data, if required.

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

1. Attempt any *five* of the following : 15

(a) Write the importance of statistics.

(b) Explain data.

(c) Define median Write its merits and demerits.

(d) Explain coefficient of variation.

(e) Define event, explain their types.

(f) Explain the types of correlation.

(g) Define range. Find range from the following data :

10, 15, 13, 12, 18, 19, 22, 40, 16.

2. Attempt any *two* of the following : 10

(a) Define statistics.

(b) Write the scope of statistics in computer science.

(c) Write limitation of statistics.

3. Attempt any *two* of the following : 10

(a) Explain histogram with suitable example.

(b) Explain pie-diagram with suitable example.

(c) Explain relative and cumulative frequency with suitable example.

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4. Attempt any *two* of the following :

10

(a) Find mean from the following data :

Class	Freq.
5-10	7
10-15	2
15-20	4
20-25	5
25-30	3

(b) Explain the measures of central tendency.

(c) Find mode from the following data :

Class	Freq.
0-30	22
30-60	198
60-90	110
90-120	95
120-150	42
150-180	33

5. Attempt any *two* of the following :

10

(a) Explain variance.

(b) Find standard deviation from the following data :

x_i	f_i
2	6
4	10
6	20
8	24
10	12
12	7

(c) Explain measures of dispersion.

6. Attempt any *two* of the following :

10

(a) Define probability. Write its axioms.

(b) Prove that :

$$P(A \cup B) = P(A) + P(B) - P(A \cap B)$$

(c) Explain permutation and combination.

7. Attempt any *two* of the following :

10

(a) Explain regression.

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

X	Y
10	9
6	4
9	6
10	9
12	11
13	13
11	8
9	4

(c) Explain correlation.