B.Sc. (Information Technology)-II Third Semester (Old)
BScIT232 - Statistics and Numerical Methods Paper-II

P. Pages : 2

Time : Three Hours

Max. Marks : 80

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Notes : 1.   All questions are compulsory and carry equal marks.
        2.   Draw neat and labelled diagrams wherever necessary.
        3.   Avoid vague answers and write answers relevant to questions only.

1.   EITHER.

a)   What do you mean by statistics? Explain in detail with its scope.   **8**

b)   Calculate weighted Harmonic mean.   **8**

Size	Weight
79.24	1
5.86	3
0.64	6

OR

c)   Calculate the Mean, median and mode.   **8**

Mid point	59	61	63	65	67	69	71	73
Frequency	1	2	9	48	131	102	40	17

d)   Distinguish between classification and tabulation.   **8**

2.   EITHER.

a)   Calculate K.P. Coefficient of skewness.   **8**

Sr. No.	1	2	3	4	5	6
Income Rs.	10	20	30	40	50	60

b)   Calculate mean deviation from mode and it's coefficient.   **8**

Marks	10	12	15	18	20	22	25
No. of Students	5	2	3	8	7	6	4

OR

c)   What is standard Deviation? Explain the properties of a good measure of dispersion.   **8**

d)   Fit the regression of equation of x on y and y on x from the following data.   **8**

X	10	20	30	40	50	60
Y	15	5	10	25	30	40

Obtain the estimate of y when x = 22.

3.   EITHER.

a)   What is data filter? Explain advance filter in brief.   **8**

b)   Distinguish between correlation and Regression.   **8**

OR

c)   Explain Paasche's method in detail with suitable example.   **8**

d)   Fit a straight line by least square method.   **8**

x = 0	1	2	3	4
y = 1	1.8	3.3	4.5	6.3

4.   EITHER.

a)   Evaluate $w = x + y + z$ where $x = 9678$ $y = 678$ and $z = 78$, assume that there is no inherent   **8**
       error in X, Y and Z and the length of mantissa is 4.

b)   Define :   **8**
       i)   Conversion Errors.   ii)   Roundoff Errors.
       iii) Truncation error   iv)   Modeling error.

OR

c)   Write a brief note on pitfalls and precautions.   **8**

d)   Find relative error in   **8**
       $z = u.v$ to x. y $u = 1.3$, $v = 4.5$, $x = 3.2$, $y = 3.6$.

5.   Solve all the questions.

a)   Write a note on frequency distribution.   **4**

b)   Explain Range and Quartile Deviation in brief.   **4**

c)   Distinguish between time Reversal test and factor Reversal test.   **4**

d)   Explain importance of error estimation.   **4**

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