2020

STATISTICS — HONOURS — PRACTICAL

Paper : CC-7P

Full Marks : 30

The figures in the margin indicate full marks.

1. Write a program in C to prepare a frequency distribution taking class intervals of length 5 for the following data :

    79, 65, 59, 42, 57, 45, 68, 47, 63, 53, 30, 35, 15, 48, 26, 20, 40, 55, 50, 57, 59, 63, 77, 77.

    Your output should contain the class intervals, corresponding frequencies and the corresponding relative frequencies. 12

2. Write a function in C that will return the values of $g(x) = x\cos^{-1}x - \log_2(1+x)$, $0 \leq x \leq 1$ when referenced in the main function. Now, within the main function calculate 200 values of $g(x)$ corresponding to 200 equally spaced values of x and hence find the approximate area of the region enclosed by $y = g(x)$, $x = 0$ and $x = 1$. 9

3. Write a program in C to check whether a given square matrix of order m is skew symmetric or not. Note that your program will return YES if the input matrix is symmetric and return NO otherwise. 9

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