B.Sc. Honours Examinations 2020
(Under CBCS Pattern)
Semester - III
Subject: STATISTICS
Paper: C7T & C7P
(Statistical Computing using C)

Full Marks : 60

Time : 3 Hours

Candiates are required to give their answer in their own words as far as practicable.
The figures in the margin indicate full marks.

THEORY

Attempt any *two* questions from the following :   2×20=40

1. (a) Discuss about different loop control structure in C.

   (b) What is role of break and continue statement in a loop? Discuss with examples.

   (c) What is conditional operator in C? Write a C program to obtain minimum of three numbers using conditional operator.   7+6+7

2. (a) Write a C function to obtain correlation coefficient for a bivariate dataset.

(b) What is macro in C? How does it differ from functions in C? Write a C macro to obtain Bowley's measure of skewness when 1st, 2nd and 3rd quartiles are given.

10+2+4+4

3. (a) Write a C function which returns both standard deviation and Coefficient of variation for a set of n observations.

(b) Distinguish between i++ and ++i in C.

(c) How do you initialize a one dimensional and two dimensional array in C?

(d) What is dynamic memory allocation?   10+3+4+3

4. (a) How do you use goto keyword in C? Why it should be avoided in C programming? Give an example in favour of using goto.

(b) What is storage class? Distinguish between Static, Register and External storage class.

(c) Write a C function to obtain n random numbers from Normal distribution with mean m and standard deviation s.   5+6+9

PRACTICAL

Attempt any *one* question from the following :   1×20=20

1. Write a C program which reads data from a text file and calculate moment measures of skewness and kurtosis.

2. Write a C program to fit a linear regression equation to a bivariate dataset and obtain the predicted values.

3. Write a C program to obtain Prob $(X \le x)$ where $X \sim$ Hypergeometric (N, K, n).

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