

U.G. 3rd Semester Examination - 2020

MATHEMATICS

[HONOURS]

Course Code : MATH(H)-CC-P-07

[PRACTICAL]

SET-14

Full Marks : 20

Time : 2 Hours

The figures in the right-hand margin indicate marks.

Symbols and notations have their usual meanings.

2. Answer any **one**: 10×1=10
- i) Write a C program to find the trace and determinant of a matrix of order $n \times n$.
 - ii) Write a C program to determine whether a number is prime or not.
 - iii) Write a C program to find the maximum among n given integers.

1. Answer any **one**: 10×1=10

- i) Write a C program to solve the equation $x^2 + 3x - 5 = 0$ using bisection method.
- ii) Find the area bounded by the curve and the x -axis from 7.47 to 7.52 by implementing Trapezoidal rule in C programming language:

x	7.47	7.48	7.49	7.50	7.51	7.52
$f(x)$	1.93	1.95	1.98	2.01	2.03	2.06

- iii) Write a C program to evaluate the integral

$$\int_0^{1.2} e^{-8x^2} \cos x \, dx \text{ by Trapezoidal rule, taking } n=12.$$

[Turn over]