

U.G. 3rd Semester Examination - 2020

MATHEMATICS

[HONOURS]

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

[PRACTICAL]

SET-7

Full Marks : 20

Time : 2 Hours

The figures in the right-hand margin indicate marks.

Answer all the questions:

10×2=20

1. Write a program in C to find $y(0.4)$ from the equation

$$\frac{dy}{dx} = x^2 - 2xy, y(0)=1 \text{ taking } h=0.1 \text{ by Runge-Kutta}$$

method. Write the output result.

2. Write a C programme to find the solution of the system of equations by Gaussian elimination method:

$$5x_1 + x_2 - 2x_3 = 1,$$

$$2x_1 - x_2 - 5x_3 = -15,$$

$$x_1 - 3x_2 + 7x_3 = 16.$$

Hence solve it.
