

U.G. 3rd Semester Examination - 2021**MATHEMATICS****[HONOURS]****Course Code : MATH-H-CC-P-07****[PRACTICAL]****SET-1**

Full Marks : 20

Time : 2 Hours

*The figures in the right-hand margin indicate marks.***Answer all the questions:** $10 \times 2 = 20$

1. Write a C programme to find the root of $x^3 + 2x - 6 = 0$, correct to four decimal places, by Newton-Raphson method. Hence find the root.
2. Write a C programme to find the largest eigen value and the corresponding eigen vector of the following matrix, correct upto three decimal places.

$$\begin{pmatrix} 8 & -6 & 2 \\ -6 & 7 & -4 \\ 2 & -4 & 8 \end{pmatrix}$$

Hence write the output of the result.
