2022

COMPUTER SCIENCE

[HONOURS]

(CBCS)

(B.Sc. Third Semester End Examination-2022)

PAPER-SEC1T

Full Marks: 20   **Time: 01 Hrs**

The figures in the right hand margin indicate marks
Candidates are required to give their answers in their own words as
far as practicable
Illustrate the answers wherever necessary

Group-A

1. **Answer any two questions of the following:**   **2x2=4**

    a) How to create a column vector with 15 equally spaced elements in which the first element is -21 and the last element is 12.

    b) Explain the functions abs(x) and round (x) with an example.

    c) Distinguish between plot and stem.

    d) Give any two advantages of cell array in matlab programming

Group-B

Answer any four questions of the following: **4x4=16**

2. Write a MATLAB program to read a square matrix and then find its Eigen values and inverse.

3. Write a MATLAB program to find the sum of first n terms of the series

$$1+\frac{1}{2!}+\frac{1}{3!}+\frac{1}{4!}+\cdots+\frac{1}{n!}+\cdots\cdot$$

4. Write a script in MATLAB to check a number is palindrome or not.   2+2+1

5. Develop a MATLAB code for finding the mean, standard deviation and variance for a given n numbers.

6. Write the coding to draw the following plots

   a) Stem Plot

   b) Stair plot

   c) Bar plot

   d) Pie plot

7. Develop a function foe finding factorial of a number. Also design MATLAB codes for finding binomial co-efficient

8. Write a MATLAB program to plot a graph of the function

$$f(x)=\frac{(x+2)^2}{(3+2x^2)}\ for-2\le x\le6.$$