M.Sc. 3rd Semester Examination, 2022

COMPUTER SCIENCE

(*Graphics Lab/Advanced OS Lab*)

(PRACTICAL)

PAPER — COS-395(M_1 & M_2)

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

PAPER—COS-395(M_1)
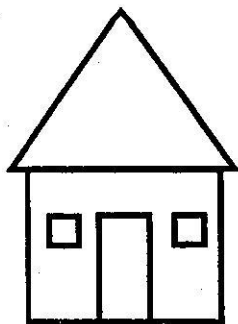
(*Graphics Lab*)

Full Marks : 25

Time : 2 hours

Answer any **one** on Lottery basis : 20×1

1. Write a program to display a pentagon using Generalized Bresenham's Line drawing algorithm.

2. Write a program to show all standards of 2D Shear.

3. Write a menu driven program to display all standards of 2D reflection.

4. Write a program to display the below figure

5. Write a program to perform the following sequential 2D transformation :

   (a) Translate a square (where $t_x = t_y = 10$)

   (b) Reflected the translated square w.r.t. origin

(c) Finally rotate the reflected square by 90 degree about origin and display the final result.

$$\begin{bmatrix} \text{PNB} - 02 \\ \text{Viva} - 03 \end{bmatrix}$$

PAPER—COS-395(M₂)

(*Advanced OS Lab*)

Full Marks : 25

Time : 2 hours

Answer any **one** on Lottery basis : 20×1

1. Write a program to create a Zombie Process.

2. Write a program to fork a new child process to display list of files and parent process should wait for the completion of child.

3. Write a program to create a new process using system () that displays the processes running on your system.

4. Write a program to duplicate a Program's Process using fork ().

5. Write a shell program to check a file is exist or not and if it is exists then display its type.

6. Write a shell program to make a basic calculator.

7. Write a shell program to generate first 20 Fibonacci numbers.

8. Write a shell program to check a string is palindrome or not.

$$\begin{bmatrix} PNB - 02 \\ Viva - 03 \end{bmatrix}$$

─────────