PG/IIIS/COS-391/19(Pr.)

M.Sc. 3rd Semester Examination, 2019

COS

(Practical)

PAPER — COS-391(M1 + M2)

Full Marks : 50

Time : 2 hours

The figures in the right hand margin indicate marks

MODULE— I

(*Computer Graphics* (*Lab.*))

[*Marks* : 25]
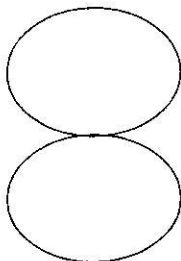
Answer any **one** question :   15 × 1

1.   Write a program to draw a polygon using Generalized Bresenham's line drawing algorithm.

2. Write a program to draw two concentric circles using any standard circle drawing algorithm.

3. Write a program to show all standards of 2D rotation.

4. Write a program to show X-direction shear over a square.

5. Write a program to show that "Two parallel lines remains parallel after transformations".

6. Write a program to perform the below transformation in sequence.

   (i) Reflection w.r.t. st. $Y = X$

   (ii) Then rotation of the reflected line by an angle of 60 degree.

7. Write a program to show any three types of 2D reflections.

8. Write a program to print the initials of your name using any standard line drawing algorithm.

9. Write a program to perform Y-direction shear over a square.

10. Write a menu driven program to do the following 2D transformation :

    (*i*) Scaling w.r.t. arbitary point

    (*ii*) Translation

    (*iii*) Rotation by an angle of 45 degree.

11. Write a program to draw the ellipses as shown below using mid-point ellipse generation algorithm :

12. Write a program to draw a hexagon whose sides are of equal length.

13. Write a program to draw a rectangle and then reflect it about the line $X = Y$.

PNB – 04 Marks

Viva – 06 Marks

MODULE – II

(*Computer Science*)

[*Marks* : 25]

Answer any **one** question (**Lottery Basis**) : 15×1

1. (*a*) Write a program in C to print process id of a process and its parent process id also.

   (*b*) Write a shell program to check whether a string is palindrome or not.

(*Continued*)

2. (a) Write a program in C to create a new process using system () that display the processes running on your system.

   (b) Write a shell program to find the highest of three numbers.

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

4. (a) Write a program in C to duplicate a program's process using fork ( ).

   (b) Write a shell program to generate first 20 fibonacci numbers.

5. Write a program in C to create a Zombia process.

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

   (b) Write a program in C to create a new process using system () that display list of files.

7. (a) Write a shell program to check whether a number is palindrome or not.

   (b) Write a program in C to duplicate a program's process using fork ( ).

8. (a) Write a shell program to find reverse of an integer number.

   (b) Write a program in C to duplicate a program's process using fork ( ).

9. (a) Write a shell program to check a file is existed or not and if it is exist then display its type.

   (b) Write a program in C to print process id of a process and its parent process id also.

10. Write a program in C to implement FCFS CPU scheduling algorithm.

Viva voce— 05 Marks

Practical Note Book —05 Marks