2019

MCA

4th Semester Examination

Computer Graphics Lab

PAPER – MCA-406

Full Marks : 50

Time : 2 hrs

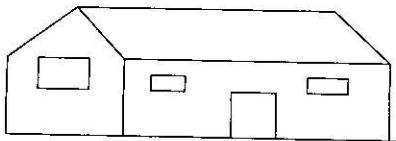The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their

Own words as far as practicable.

Illustrate the answers wherever necessary.

ANSWER ANY ONE: (1 X 35)

1. Write a program to display the below figure using any standard line drawing algorithm.

2. Write a program to implement X-direction shear using 2D object.

3. Write a program to show all the standards of 2D reflections (Menu driven program).

4. Write a program to display the below figure using Bresenham's circle generation algorithm.
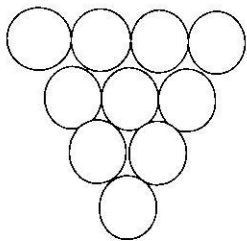
5. Write a program to draw a line y = -x and then rotate it by an angle of 45 degree.

6. Write a program to draw a hexagon and then scale the hexagon by twice of its size.

(Continued)

7. Write a program to do the following sequential transformation:

   (i) Rotation of a Square w.r.t. to an artritary point (point should be the bottom left vertex of the Square)

   (ii) Then reflect the rotated Square w.r.t. to the origin.

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

9. Write a program to do the following transformation (Menu driven program).

   (i) Translation

   (ii) Reflection w.r.t. St. line y=x

   (iii) Y- direction shear

10. Write a program to draw the ellipse as shown below using midpoint ellipse generation algorithm
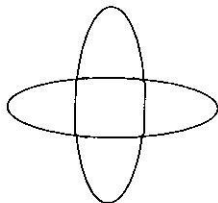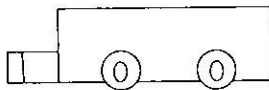

11. Write a program to draw the following interseeling lines and then rotate both of them by an angle of 45 degree.
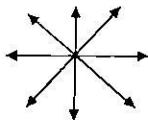
(each line should be of different colour)

12. Write a program to draw the following figure without using in built funciotn.

$$\begin{bmatrix} PNB - 05 \\ VIVA - 10 \end{bmatrix}$$