Total number of printed pages – 4

2019

BCA

6th Semester Examination

Computer Graphics & Multimedia Lab

(Set – 1)

Paper – 3294

Full Marks – 100

Time : 3 Hours

The questions are of equal value for any group / half.
The figures in the 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** question : (lottery basis)

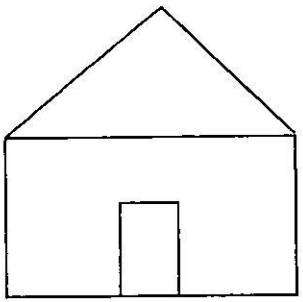
40 ×1=40

1. Write a program to draw a polygon using Generalized Bresenham's line drawing algorithm.
2. Write a program to draw three concentric circle of different color using midpoint circle generation algorithm.
3. Write a program to draw an ellipse using any standard ellipse generation algorithm.

P.T.O.

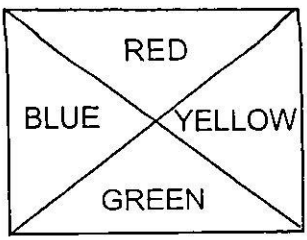
4. Write a menu driven program to show all the standards of 2D reflections.

5. Write a program to draw the below figure using standard algorithms (i.e. without using any inbuilt functions).



6. Write a program to perform the following sequential transformation.
   (i) Rotate a square by an angle of 60° w.r.t. origin.
   (ii) Then scaled the rotate square by twice of its size.

7. Write a program to fill the following figure using appropriate color using any standard filling algorithm.



8. Write a program to implement Cohen-Sutherland line clipping algorithm.

9. Write a program to perform the following transformation on a polygon (menu driven program).

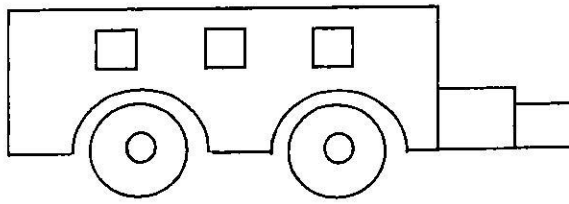
   (i) Rotation w.r.t. to an arbitary point.

   (ii) Translation w.r.t. origin

   (iii) Scaling w.r.t. an arbitary point

10. Write a program to show that scaling followed by a reflection is equivalent to reflection followed by scaling.

11. Write a program to draw the below figure using standard algorithm.

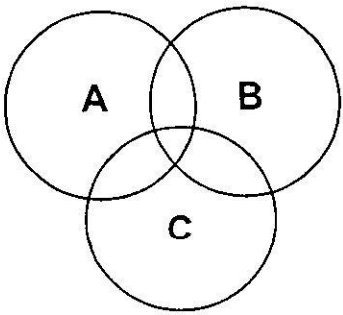


12. Write a program to draw a triangle using Bresenham's line drawing algorithm.

13. Write a program to implement 2D reflection of a straight line.

14. Write a program to implement rotation of a square with respect to origin.

15. Draw the following figure using any circle drawing algorithm.



Viva → 20 Marks

Practical Note Book → 10 Marks

[Internal Assessment – 30 marks]