



Reg. No. :

Name :

Seventh Semester B.Tech. Degree Examination, November 2013
(2008 Scheme)
08.701 : COMPUTER GRAPHICS (R)

Time : 3 Hours

Max. Marks : 100

PART – A

Answer **all** questions :

(10×4 = 40 Marks)

1. Explain any two interactive graphic input devices.
2. What is the difference between raster scan systems and random scan systems ?
3. Explain about frame buffer.
4. What is anti aliasing ? Explain.
5. Discuss the significance of homogeneous co-ordinate systems.
6. A triangle is defined by $\begin{bmatrix} 2 & 4 & 4 \\ 2 & 2 & 4 \end{bmatrix}$. Find the transformed co-ordinate after following a reflection about line $y = -x$.
7. What is viewing transformation ?
8. How is backface detection done ?
9. Compare Robert's and Sobel's edge detector.
10. Explain the region labeling algorithm.





PART – B

Answer **any one** question from **each** Module.

(3×20 = 60 Marks)

Module – I

11. a) Explain bresenhan's line drawing algorithm for slope < 1 . 10
b) Explain the working of any two graphic output devices. 10

OR

12. a) Compare floodfill and boundary fill algorithm. 10
b) Explain DDA scan conversion line drawing algorithm with example. 10

Module – II

13. a) Explain the Cohen Sutherland line clipping algorithm. 10
b) Determine a sequence of basic transformations that is equivalent to the x-direction shearing matrix. 10

OR

14. Explain the 3-D transformations. Derive the 3-D transformation matrix for the following operations in homogeneous co-ordinates. 20
1) Translation
2) Rotation
3) Scaling
4) Reflection

Module – III

15. a) What do you mean by projection ? Differentiate between parallel projection and perspective projection. 10
b) Explain equalization using cumulative frequency function with example. 10

OR

16. a) Explain the different methods used for following and representing boundaries. 10
b) What are the different methods used for back face detection ? Explain. 10