



Reg. No. :

Name :

**Sixth Semester B.Tech. Degree Examination, April 2014
(2008 Scheme)**

**Branch : Information Technology
08.605 : COMPUTER GRAPHICS**

Time : 3 Hours

Max. Marks : 100

PART – A

(10×4=40 Marks)

Answer **all** questions. **Each** question carries **four** marks.

1. What is display processor ? Discuss its functions.
2. Name any two graphic output devices and explain their functions.
3. How is frame buffer loading performed ?
4. Define resolution of a video monitor.
5. Mention the steps involved in the rotation of a 2D object about a selected pivot point.
6. Explain the 2D viewing transformation pipeline.
7. What is the procedure for clipping a text ?
8. Discuss the concept of vanishing point.
9. What do you mean by image segmentation ?
10. Explain perspective projection.

P.T.O.



PART – B

(3×20=60 Marks)

Answer **one full** question from **each** Module. **Each** question carries **20** marks.

Module – I

11. a) Explain an algorithm for filling a polygon ensuring that excessive stacking is reduced. 12
b) Compare raster scan systems and random scan systems. 8

OR

12. a) Summarize the midpoint circle drawing algorithm. 10
b) Discuss the methods for solid area scan conversion. 10

Module – II

13. a) Explain a parametric line clipping algorithm. 12
b) Prove that the concatenation of two rotation transformations is additive. 8

OR

14. a) Sketch the 3D viewing pipeline and explain. 6
b) Discuss the advantages of homogeneous co-ordinate system. 6
c) Explain the rotation of a 3D object about an axis that is not parallel to one of the co-ordinate axes. 8

Module – III

15. a) Summarize the steps involved in the depth buffer method for eliminating hidden surfaces. 12
b) Explain how Sobel edge detector works. 8

OR

16. a) What is histogram equalization ? Explain. 7
b) Explain an algorithm for back face detection and removal. 13
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