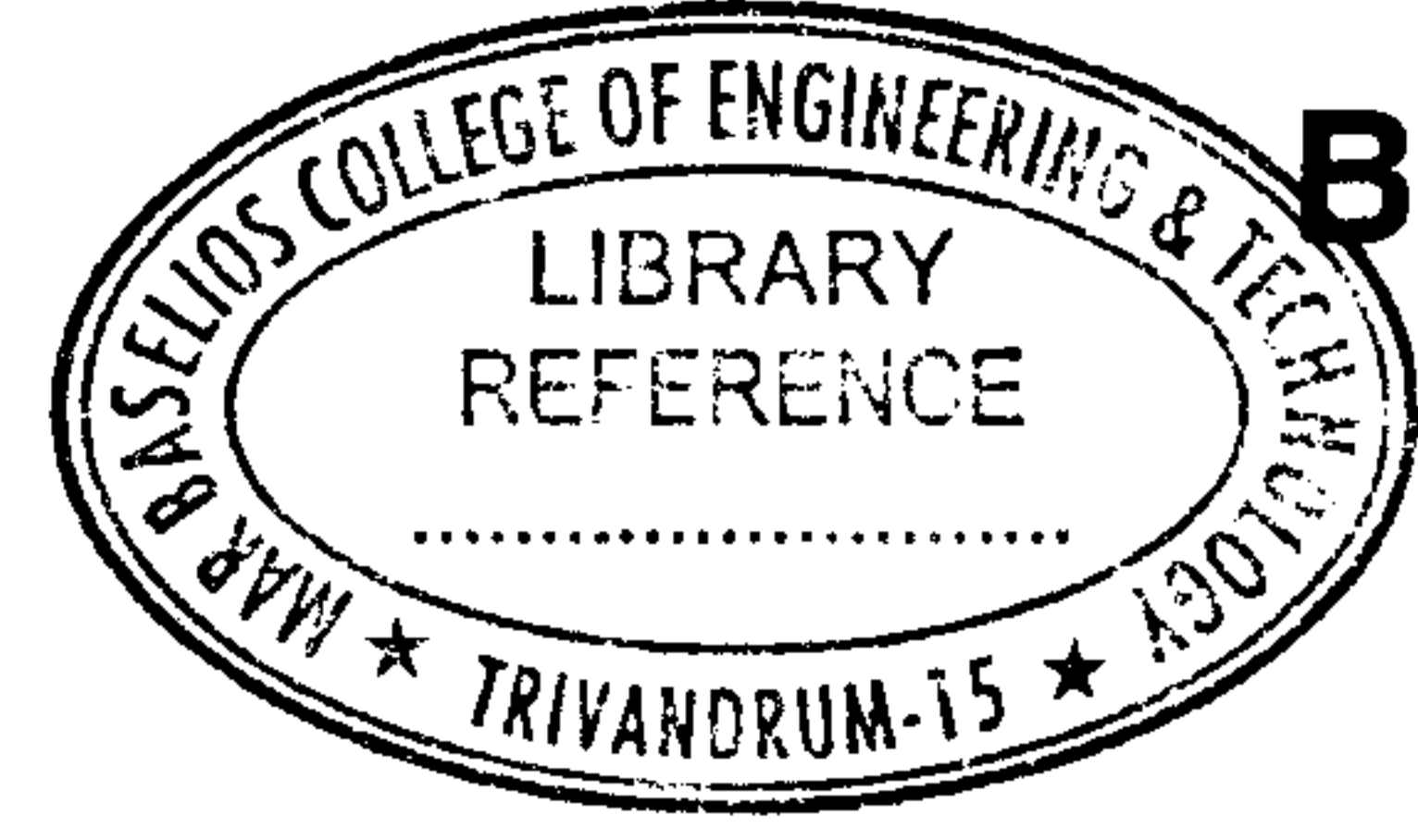




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B – 5595

Reg. No. :

Name :

**Sixth Semester B.Tech. Degree Examination, March 2017
(2008 Scheme)
08.605 COMPUTER GRAPHICS (F)**

Time : 3 Hours

Max. Marks : 100

PART – A

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

(10×4=40 Marks)

1. Explain boundary fill algorithm.
2. Explain the working of a raster scan display.
3. What is display processor ? Explain its functions.
4. Rotate a point (x, y) about an arbitrary point (5, 5) by an angle 45° in the anticlockwise direction.
5. Prove that concatenation of two rotation transformations is additive.
6. Explain the advantages of the homogeneous co-ordinate system. Represent the basic two dimensional transformations in homogeneous co-ordinates.
7. What is the procedure for dipping a text ?
8. Discuss the concept of vanishing point.
9. Compare object space and image space algorithms.
10. What do you mean by image segmentation ?

P.T.O.



PART – B

(3×20=60 Marks)

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

Module – I

11. Derive the decision parameters and explain Bresenham's line drawing algorithm for the case $|m| < 1$. Also generate the intermediate points for the line whose starting point is at (20, 12) and ending point is at (30, 28). 20

OR

12. Derive the decision parameters and explain mid point circle drawing algorithm. Also generate the intermediate points along the circumference of the circle whose centre is at (0, 3) and radius 3. 20

Module – II

13. a) Explain Cohen-Sutherland clipping algorithm. 12
b) Explain the 2D viewing transformation pipeline. 8

OR

14. a) How is a 3D view specified ? Explain. 8
b) Explain the rotation of a 3D object about an axis that is not parallel to one of the co-ordinate axis. 12

Module – III

15. a) Explain z Laffer algorithm. Mention any two limitations of it. 12
b) Explain how sobel edge detector works. 8

OR

16. a) Compare parallel and perspective projections. 8
b) Explain an algorithm for back face detection and removal. 12
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