

GUJARAT TECHNOLOGICAL UNIVERSITY

MCA - SEMESTER- IV EXAMINATION – WINTER 2016

Subject Code: 640008

Date: 26/10/ 2016

Subject Name: Computer Graphics (CG)

Time: 10.30 am to 01.00 pm

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1 (a)** Explain the following terms in brief: **14**
1. Aspect ratio
 2. World Co-ordinates
 3. Aliasing.
 4. Refresh buffer
 5. Vanishing Point
 6. Homogenous coordinates
 7. View port
- Q.2 (a)** Write down the various applications of Computer Graphics. **07**
- (b)** Write a short note on Random Scan Display **07**
- OR**
- (b)** Write a short note on Raster Scan Display **07**
- Q.3 (a)** Write a short note on the various 2-D transformations: Translation, Scaling, Rotation **07**
- (b)** Write a short account on DDA line algorithm. **07**
- OR**
- Q.3 (a)** Write a short note on Bresenham Line Algorithm with suitable example. **07**
- (b)** Write a short note on 2D Reflection (along all possible axis) and 2D shear. **07**
- Q.4 (a)** Write short notes on: **07**
1. 2D point clipping
 2. Output primitives
- (b)** Write a short note on Line Attributes. **07**
- OR**
- Q.4 (a)** Explain the following: **07**
1. Depth Cueing
 2. Digitizers
- Q.4 (b)** Explain any three OpenGL functions with parameters. **07**
- Q.5 (a)** Explain Cohen-Sutherland Line Clipping Algorithm with example **07**
- (b)** Write a brief account on parallel projection method. **07**
- OR**
- Q.5 (a)** Explain Sutherland-Hodgeman Polygon Clipping Algorithm with example **07**
- (b)** Write a brief account on perspective projection method. **07**
