PVP 14

Code: IT6T2

III B.Tech - II Semester – Regular/Supplementary Examinations
March 2020

COMPUTER GRAPHICS AND ALGORITHMS
(INFORMATION TECHNOLOGY)

Duration: 3 hours Max. Marks: 70

PART – A

Answer *all* the questions. All questions carry equal marks

11x 2 = 22 M

1.

a) Define Pixel and Frame-Buffer.

b) Describe CRT display.

c) Give primitives for Event listener in OpenGL.

d) List Color primitives in OpenGL.

e) Define Homogeneous Coordinates.

f) What are affine transformations?

g) Define Window and Viewport.

h) Define View volume.

i) What is clipping?

j) Describe Inside outside test.

k) Discuss Boundary fill algorithm.

PART – B

Answer any *THREE* questions. All questions carry equal marks.

3 x 16 = 48 M

2. a) List and explain application areas of Computer Graphics. 8 M

   b) Demonstrate types of Graphics Functions in OpenGL. 8 M

3. a) Illustrate various Input Devices. 8 M

   b) Explain display lists of OpenGL with an example. 8 M

4. a) Explain Two-Dimensional geometric transformations. 8 M

   b) Derive a transformation matrix for Rotation about arbitrary axis. 8 M

5. a) Derive matrix for General parallel projection. 8 M

   b) Demonstrate perspective projection with primitives of OpenGL. 8 M

6. a) Illustrate Cohen-Sutherland line clipping Algorithm. 8 M

   b) Describe Z-Buffer Algorithm for Hidden-Surface Removal. 8 M