

Code: 13A12401

B.Tech II Year II Semester (R13) Supplementary Examinations December/January 2015/2016

COMPUTER GRAPHICS & MULTIMEDIA

(Information Technology)

Time: 3 hours

Max. Marks: 70

PART – A

(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- (a) Define Random Scan/Raster Scan displays.
 - (b) What do you mean by retracing? Define horizontal as well as vertical retracing.
 - (c) Define shadow masking.
 - (d) What are the steps involved in 3D transformation?
 - (e) What are the important properties of Bezier curve?
 - (f) What are the different ways of specifying spline curve?
 - (g) Write about different Audio file formats.
 - (h) What are advantages of DVST over CRT? Also list some disadvantages of DVST.
 - (i) Write about Illumination & shading.
 - (j) What do you mean by scan conversion?

PART – B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

- 2 (a) Write about Computer Aided Design.
(b) Briefly describe Image Processing.

OR

- 3 Write in detail about Raster Scan Systems.

UNIT – II

- 4 (a) What is meant by composite transformations?
(b) Enumerate the differences between 2D-graphics and 3D-graphics.

OR

- 5 Use the Cohen Sutherland algorithm to clip line $P_1(70, 20)$ and $P_2(100, 10)$ against a window lower left hand corner (50, 10) and upper right hand corner (80, 0).

UNIT – III

- 6 What are parametric cubic curves? Explain them with example.

OR

- 7 Explain about the rendering techniques for shaded images in detail.

UNIT – IV

- 8 (a) Illustrate the key differences between flat shading, gouraud shading and phong shading of polygons.
(b) Describe the technique of color interpolation shading. How does it differ from Phong shading?

OR

- 9 Describe the Z-buffer algorithm. For what type of scenes Z-buffer does not perform well. What effects are difficult to implement with Z-buffer? Explain why large difference between the far and near distances in the projection transformation will have a negative effect on Z-buffer performance.

UNIT – V

- 10 (a) Write the differences between MIDI and Digital Audio.
(b) Write about digital video containers.

OR

- 11 Explain in detail about making Still Images.
