**Code: 13A12401** **R13**

B.Tech II Year II Semester (R13) Regular Examinations May/June 2015

**COMPUTER GRAPHICS & MULTIMEDIA**

(Information Technology)

Time: 3 hours Max. Marks: 70

**PART – A**

(Compulsory Question)

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1 Answer the following: (10 X 02 = 20 Marks)

(a) Define computer graphics.
(b) Define random scan displays.
(c) What is shearing?
(d) What is translation?
(e) What is frame buffer?
(f) Distinguish between window port and view port.
(g) Define clipping.
(h) What you mean by parallel projection?
(i) List out building blocks of multimedia.
(j) What is MIDI?

**PART – B**

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

**UNIT – I**

2 (a) What are raster scan and random scan displays in graphical systems? Compare the essential features of both.
(b) Explain briefly about the importance of graphical user interface.

OR

3 (a) What is meant by resolution of a video display unit?
(b) Write briefly about the importance of graphics in education, training and image processing.

**UNIT – II**

4 (a) Explain the DDA scan conversion algorithm for generating the points on line segment when two end-points are given as input.
(b) Digitize the line with end-points (20, 10) and (30, 18) using DDA algorithm.

OR

5 Distinguish the transformations performed in 2-D graphics and 3-D graphics. Explain how many matrices are needed to define each of the basic transformation.

**UNIT – III**

6 State blending functions used in B-spline curve generation. Explain the terms involved in it.

OR

7 (a) Derive the matrix form for the cubic Bezier curves.
(b) Explain briefly about parallel projections.

**UNIT – IV**

8 Distinguish between object-space and image space methods of visible surface detection algorithms. Give examples for each.

OR

9 List and describe the algorithms of any two shading models for polygons. Compare them.

**UNIT – V**

10 Explain various components of multimedia in audio, video and images and describe how multimedia data is stored in it.

OR

11 List and explain basic tools that are required for the multimedia software.



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