P – 6150

B. C. A. (Third Semester)
EXAMINATION, Nov./Dec., 2014
Paper – 305
COMPUTER GRAPHICS AND MULTIMEDIA

Time : Three Hours

Maximum Marks : 80

Minimum Pass Marks : 32

Note– Attempt *five* questions. All questions carry equal marks.

Unit – I

1. Define computer graphics. Explain its significance in present scenario. Give one most important application of computer graphics. 16

Or

What are interactive input devices ? What are their functions ? Describe with neat diagram the working of one locator device.

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Unit – II

2. Derive Bresenham's line drawing algorithm. Use this algorithm to find pixel activation list for generating line segment from the point (20, 10) to (30, 18).   16

Or

Discuss scan line polygon fill algorithm.

Unit – III

3. Describe four bits code method or Cohen-Sutherland for line clipping. How does this algorithm function ? What are its drawbacks ?   16

Or

Write short notes on the following–

(i) Polygon clipping

(ii) Text clipping.

Unit – IV

4. Given a triangle A (10, 10), B (20, 10), C (15, 20). Find transformed coordinates of A, B, C when the triangle is rotated in anticlockwise direction to an angle of 45° about the fixed point (15, 10).   16

Or

Perform scaling of triangle having vertices A $(0, 0)$, B $(2, 2)$, C $(4, 2)$ by the factor of 2 in both directions, keeping C $(4, 2)$ fixed.

Unit – V

5. Explain various multimedia application and multimedia authoring tools in detail.   16

Or

Write short notes on the following (any two)–

(i) Video and Audio

(ii) Data types

(iii) Text and images.