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53 (IT 602) CGMM

2017

COMPUTER GRAPHICS AND MULTIMEDIA

Paper : IT-602

Full Marks : 100

Time : Three hours

**The figures in the margin indicate
full marks for the questions.**

Answer **any five** questions.

- (a) Discuss RGB colour module with a neat diagram.

(b) Shadow masking provides much wider range of colour — Describe in the context of raster scan display system.

(c) Compare Raster scan and Random scan display. (Minimum 3 points)

(d) Write in short about various multimedia systems. 5×4=20

Contd.

2. (a) Write Bresenham's line drawing to draw a straight line. 10
- (b) Write a C program to implement Digital Differential Analyzer (DDA) algorithm to draw a straight line. 10
3. (a) Explain briefly the *three* basic 2D transformations with their matrix representations. 10
- (b) Summarize the midpoint circle generation algorithm. 10
4. (a) What do you mean by clipping? Give an example for text clipping. 5
- (b) Differentiate between parallel and perspective projection. 5
- (c) What is line clipping? Explain briefly *any one* line clipping algorithm with example. 10
5. (a) What is scan line polygon fill algorithm? Discuss how can we fill a region considering the three different cases for scanline. 10

- (b) What is composite transformation ?
Explain 2D composite translation. 5
- (c) Discuss 2D viewing pipeline. 5
6. Write short notes on : **(any four)** $5 \times 4 = 20$
- (a) Viewport transformation
 - (b) Graphics software standards
 - (c) Character attributes
 - (d) Video controller
 - (e) Plasma panels.
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