9216/A23 **OCTOBER 2009**

COMPUTER GRAPHICS

Time : Three hours Maximum : 100 marks

PART A — (6 × 5 = 30 marks)

Answer any SIX questions.

1. What are parallel and perpendicular lines? Explain.

2. How to generate characters?

3. What are device coordinates? Explain.

4. Explain How to thicken the line segments?

5. What are convex and concave polygon's? Explain.

6. Explain polygon. Flood fill algorithm.

7. Write HMR for translation and scaling.

8. Explain display procedures in detail.

9. Explain window and viewport.

10. Explain Midpt subdivision algorithm.

PART B — (4 × 10 = 40 marks)

Answer any FOUR questions.

11. What are Random scan and Rastu scan systems?

12. Explain beam penetration and shadow mask CRT's.

13. What are line attributes? Explain.

14. How to translate a real world scene to device coordinates?

15. Draw and explain the function of LCD's.

16. Explain the various 3D transformations.

PART C — (2 × 15 = 30 marks)

Answer any TWO questions.

17. Write the circle generation algorithm in detail.

18. Explain the various flatpanel devices available on computer graphics.

19. Write short notes on :

(a) Aspect ratio

(b) Positioning devices.

(c) Calligraphic displays.