

Code: 06MC305

MCA - III Semester Supplementary Examinations, January 2013

COMPUTER GRAPHICS

(For students admitted in 2007 & 2008 only)

Time: 3 hours

Max Marks: 60

Answer any FIVE questions
All questions carry equal marks

- 1 (a) What is computer graphics? What are the major considerations in the study of computer graphics?
(b) Describe the working principle of plotter with a neat sketch.
- 2 (a) Explain the DDA algorithm for generation of arc.
(b) Briefly explain the methods of conducting inside test of a point on a polygon.
- 3 (a) Derive the transformation matrix for rotation about an arbitrary point.
(b) Show how shear transformations expressed in terms of rotations and scales.
- 4 Describe the Sutherland-Hodgman algorithm for polygon clipping with the help of a suitable example and give its merits and demerits.
- 5 (a) What is interpolation? Briefly explain about approximation splines using interpolation with a suitable example.
(b) Explain the properties of Bezier curves.
- 6 (a) Give the transformation matrix for parallel and isometric projection.
(b) Write a short note on clipping of 3-dimensional objects.
- 7 (a) Explain about Z-buffer algorithm for back face removal of an object.
(b) Explain the features of back face detection and removal algorithm.
- 8 (a) What is animation? Write about computer animation languages.
(b) Write down the specifications for generating motion to an object.
