G 7311 (Pages : 2) Reg. No.....

Name.....

M.C.A. DEGREE EXAMINATION, MAY 2015

Fifth Semester

COMPUTER GRAPHICS

(2012 Admissions – Regular/2011 Admissions – Supplementary, Lateral entry – 2013 Admissions – Regular)

Time : Three Hours Maximum : 75 Marks

Part A

Answer any **ten** *questions.*

Each question carries 3 *marks.*

1. How computer graphics used for entertainment?
2. Illustrate the basic design of a magnetic deflection CRT.
3. Write a boundary-fill procedure to fill an 8-connected region.
4. What is reflection?
5. Write a note on projection and its types.
6. How torus can be generated?
7. What is Blobby object?
8. Brief on the conditions for geometric continuity.
9. What do you mean by sweep representation?
10. How Fractals are classified?
11. Briefly explain Warn model.
12. What do you mean by flat shading?

(10 × 3 = 30 marks)

Part B

Answer **all** *questions.*

Each question carries 9 *marks.*

13. (a) Explain midpoint circle drawing algorithm.

Or

(b) Demonstrate Sutherlan-Hedgeman Polygon clipping.

Turn over

14. (a) Describe the matrix formulation of 2D translation, scaling and rotation.

Or

(b) Discuss the general editing operations that could be carried in structures.

15. (a) Explain 3D rotation in detail.

Or

(b) Describe 3D clipping procedure.

16. (a) Discuss Hermite interpolation in detail

Or

(b) Explain B-Spline curves.

17. (a) Describe Fast Phong shading technique.

Or

(b) Illustrate how Ray-surface intersection calculated.

(5 × 9 = 45 marks)