Total No. of Questions—**8**] [Total No. of Printed Pages—**2**

Seat No.	

[4857]-1079

S.E. (Comp.) (Second Semester) EXAMINATION, 2015

COMPUTER GRAPHICS AND GAMING

(2012 PATTERN)

Time : Two Hours **Maximum Marks : 50**

N.B. **:—** (*i*) Neat diagrams must be drawn wherever necessary.
(*ii*) Figures to the right indicate full marks.
(*iii*) Assume suitable data, if necessary.

1. (*a*) Explain the following : [6]

(*i*) Frame buffer

(*ii*) Resolution

(*iii*) Aspect ratio

(*b*) Find out ponits for line segment having end points (0, 0) (– 8, – 4) using DDA line drawing algorithm. [6]

Or

2. (*a*) What is error factor in Bresenham's circle drawing algorithm ? Write Bresenham's circle drawing algorithm. [8]

(*b*) Explain in brief : [4]

(*i*) Raster scan display

(*ii*) TIFF file format

3. (*a*) Explain Even-odd inside test with example. [3]

(*b*) Write flood fill algorithm. [3]

(*c*) Explain rotation about arbitrary point. Generate transformation matrix for same. [6]

P.T.O.

Or

4. (*a*) Explain parallel and perspective projection with example. [4]

(*b*) Write and explain Cohen-Sutherland line clipping algorithm. [8]

5. (*a*) Explain point source illumination. [3]

(*b*) Explain fractals with example. [3]

(*c*) Write painters algorithm. [3]

(*d*) Explain Bezier curve in detail. [4]

Or

6. (*a*) Explain diffused illumination. [3]

(*b*) Explain RGB color model. [4]

(*c*) Explain fractal lines with example. [3]

(*d*) Explain painter's algorithm. [3]

7. (*a*) Give any *four* basic guidelines for animation. [4]

(*b*) Explain need of NVIDIA workstation in gaming. [5]

(*c*) Write a short note on OpenGL ES. [4]

Or

8. (*a*) Explain role of Maya/equivalent open source tool in graphics design. [4]

(*b*) What is segment ? Explain segment table. [5]

(*c*) Explain architecture of any NVIDIA processor. [4]