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Seat No.	
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[4757]-1078

S.E. (Computer) (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) Assume suitable data, if necessary.
 - (iii) Attempt Q. No. 1 or Q. No. 2, Q. No. 3 or Q. No. 4,
Q. No. 5 or Q. No. 6, Q. No. 7 or Q. No. 8.

1. (a) Describe Frame buffer display in computer graphics. [4]
(b) Explain display file and its structure. [4]
(c) Explain Bresenham's Line drawing algorithm. [4]

Or

2. (a) Write short notes on : Persistence, Resolution, Aspect ratio. [4]
(b) Write the properties of video display devices. [4]
(c) Using DDA algorithm find out which pixels would be turned on for the line with end points(1, 1) to (5, 3). [4]

P.T.O.

3. (a) Write Cohen-Sutherland line clipping algorithm. [4]
(b) Explain concept of viewing parameters with an example. [4]
(c) What is meant by coherence and how it can increase the efficiency of scan line polygon filling. [4]

Or

4. (a) Write the transformation matrix for translation and scaling. [2]
(b) Write algorithm to fill the polygon area using flood fill method. [4]
(c) Explain the concept of 2D rotation about an arbitrary point with matrix representation. [6]
5. (a) Compare RGB and HSV color model. [3]
(b) Explain the procedure to generate B-spline curve. [4]
(c) What is surface shading algorithm ? Explain phong shading. [6]

Or

6. (a) What are the advantages of Warnock's algorithm ? [3]
(b) Explain the concept of reflection, shadows and ray tracing. [4]
(c) Explain Hilbert's curve with an example. [6]

7. (a) What are the applications of morphing ? [3]
(b) Write a short note on 3D maxstudio or Maya. [4]
(c) Describe the various operations carried out on the segment. [6]

Or

8. (a) Explain image transformations with example. [3]
(b) Write advantages and disadvantages of segments. [4]
(c) Draw block diagram of i860. [6]