Seat
No.

S.E (Comp.) (Second Semester) EXAMINATION, 2017

[5252]-169

COMPUTER GRAPHICS AND GAMING

(2012 PATTERN)

Time : Two Hours   Maximum Marks : 50

N.B. :— *All questions are compulsory.*

1. (a) Explain the following graphics primitives :   [6]
      (i) Tablets
      (ii) Light Pen

   (b) Explain Bresenham's line drawing algorithm. Using Bresenham's
      algorithm to draw a line from (1, 1) to (5, 3).   [6]

   Or

2. (a) Explain flat panel displays in detail.   [6]

   (b) What is antialiasing ? How aliasing effect is removed in vector
      generation algorithm.   [6]

3. (a) Explain with suitable diagram concave and convex polygons.   [2]

   (b) Explain boundary fill algorithm for polygon.   [4]

   (c) Perform a 45° rotation of a triangle A(0, 0), B(1, 1) and
      C(5, 2) about the origin.   [6]

4. (a) Explain Sutherland-Hodgman algorithm for polygon clipping.   [8]

   (b) Describe Scaling w.r.t. 2D transformation.   [4]

   Or

5. (a) Explain how binary space partition algorithm be used for
      removal of hidden surfaces.   [8]

   (b) Explain Koch curve in detail giving fractal dimension.   [5]

   Or

6. (a) Explain Warnock's Algorithm.   [7]

   (b) Write short notes on :   [6]
      (i) Ray-tracing
      (ii) Transparency

7. (a) Describe Creation and Deletion operations carried out on the
      segment.   [6]

   (b) Compare conventional and computer based animation techniques.   [4]

   (c) What are advantages of CUDA ?   [3]

   Or

8. (a) Explain link list data structure to represent a display file.   [5]

   (b) Write a short note on Animation Languages.   [4]

   (c) What is morphing ? Give applications of Morphing.   [4]