Code No: **R42031**   **R10**   Set No. 1

IV B.Tech II Semester Supplementary Examinations, April/May - 2017
INTERACTIVE COMPUTER GRAPHICS
(Mechanical Engineering)

Time: 3 hours   Max. Marks: 75

Answer any FIVE Questions
All Questions carry equal marks
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1 a) List and explain the applications of computer graphics.   [8]
   b) Make a comparison between the raster-scan systems and random scan systems.   [7]

2 a) Discuss the Scan line polygon fill algorithm.   [8]
   b) Explain the boundary-fill procedure to fill an 8-connected region.   [7]

3 a) Describe the Sutherland-Hodgeman polygon clipping algorithm.   [8]
   b) Give a brief note on window to view-port co-ordinate transformations.   [7]

4 a) Briefly explain the Bezier and B-Spline surfaces.   [8]
   b) What is meant by spline? Explain the representing spline in computer graphics.   [7]

5 a) List and explain the illumination models in detail.   [8]
   b) Write a short note on specular reflection.   [7]

6 a) Discuss two images space methods that are used to deal with visible surface detection.   [8]
   b) Write a program to display the visible surfaces of a convex polyhedron using the BSP-tree method.   [7]

7   Design a storyboard layout and accompanying key frames for an animation of a single polyhedron.   [15]

8 a) Explain the author ware professional for windows (APW).   [8]
   b) Discuss the Object-oriented authoring tools.   [7]