Registration No: | | | | | | | | | | |

Total Number of Pages:

M.TECH
P2CTCC01

2nd Semester Regular Examination 2016-17
COMPUTER GRAPHICS
BRANCH: COMPUTER ENGG, COMPUTER SCIENCE, COMPUTER SCIENCE AND ENGG, COMPUTER SCIENCE AND TECH.
Time: 3 Hours
Max Marks: 100
Q.CODE: Z355

Answer Question No.1 which is compulsory and any FOUR from the rest.
The figures in the right hand margin indicate marks.

Q1 Answer the following questions: ***Short answer type*** **(2 x 10)**

a) Define intensity? What is the relation between resolution and intensity?
b) Write down different applications of computer graphics
c) What is the difference between raster-scan and random-scan?
d) What do you mean by windows?
e) Define anti-aliasing.
f) Write down different characteristics of fractals geometry.
g) What do you mean by perspective projection?
h) What is object-space method?
i) What is bi-cubic spline?
j) What do you mean by 3-dimentional rendering?

Q2 **a)** Write mid-point circle drawing algorithm. Given circle radius r=10, and the circle octant in the first quadrant from x=0 to x=y. Apply mid-point circle algorithm to compute the other points. **(10)**

b) What do you mean by look-up table? Write down different characteristics of look-up table. **(10)**

Q3 **a)** What do you mean by line-clipping? Discuss Cohen-Sutherland line clipping method briefly. **(10)**

b) Discuss Sutherland-Hodgeman polygon clipping briefly. **(10)**

Q4 **a)** What do you mean by convex hull? Define convex hull of a finite set .Discuss different computation on convex hull algorithm. **(10)**

b) What do you mean by Sweep representation? Compare between translational sweep and rotational sweep. **(10)**

Q5 **a)** Describe 3-dimentional translation, rotation, scaling and reflection briefly. **(10)**

b) What is Bezier curve? Write down different properties of Bezier curve. **(10)**

Q6 **a)** What do you mean by Shading? Compare between Phong shading and Goraud Shading. **(10)**

b) What is visible–surface detection method? Discuss back-face detection briefly. **(10)**

Q7 **Write short notes on**

a) Half toning. **(5*4)**

b) Polygon filling.

c) Medial axis representation.

d) Computer animation.