

Code No:.....
Main Examination: 2021-22
Dept. of Computer Science & Engg.
SoS, (Engg. & Tech.), GGV, Bilaspur (CG)

Set: B

Course: BTECH 6th Sem
Max. Time: 02 Hours

Subject: Computer Graphics
Max. Marks: 70

Note: Attempt any 14 questions. All are equal marks (14x5=70).

- Que. (1) What is raster and random scan system. Explain with the diagram.
- Que. (2) Discuss the internal architecture of CRT and explain it.
- Que. (3) What is shadow masking? Explain with the diagram.
- Que. (4) Write the algorithm of Circle generation.
- Que. (5) If circle radius $r=10$. Use midpoint circle algorithm and determine the position along the circle octant in the first quadrant from $x = 0$ to $x = y$.
- Que. (6) Discuss the scan line polygon fill algorithm.
- Que. (7) What is aliasing and antialiasing method?
- Que. (8) What is composite transformations? Explain with the example.
- Que. (9) Rotate the 2-D object in 45 degree of clockwise direction. If coordinates are $A=(20, 10)$, $B(60, 10)$ and $C=(35, 50)$ of triangle.
- Que. (10) Explain window to viewport coordinate transformation.
- Que. (11) Discuss the Sutherland-Hodgeman clipping algorithm with the diagram.
- Que. (12) Discuss the Weller-Atherton clipping algorithm with the diagram.
- Que. (13) Explain the Bezier curve. Give properties of Bezier curve.
- Que. (14) Explain B-SPLINE curve and surface.
- Que. (15) Explain Depth-Buffer method.
- Que. (16) Scale the unit cube 3D object in $S_x=2$, $S_y=1/2$ and $S_z=1$ direction.
- Que. (17) Explain the types of projection with the diagram.