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B.Tech. || CSE || 5th Sem
Computer Graphics
Subject Code: BTCS - 504
Paper ID:

Time allowed: 3 Hrs   Max Marks: 60

Important Instructions:
- **All questions are compulsory**
- **Assume any missing data**

PART A (10x 2marks)

Q. 1.   Short-Answer Questions:
   a) Differentiate between Random scan and Raster scan devices.
   b) Define the term Clipping.
   c) What do you mean by Aliasing?
   d) What is Viewing Pipeline?
   e) What do you understand by the term Ray Tracing?
   f) What is uniform and differential scaling?
   g) What is a vanishing point?
   h) Give matrix for Rotation transformation in 3D.
   i) What is scan conversion?
   j) What is Phong shading?

PART B (5×8marks)

Q. 2.   What is CRT? Explain its working.   CO 1

OR

What is the working principle of a Laser printer? What do you mean by Multi-   CO 1

in-one Printer?

Q. 3.   Explain Scan line filling algorithm to fill a Polygon.   CO 4

OR

Explain Flood fill filling algorithm.   CO 4

Q. 4.   How is a circle plotted with the help of a midpoint circle algorithm?   CO 2

OR

Explain DDA Line Generation Algorithm.   CO 2

Q. 5.   Explain various 2D transformations with examples.   CO 3

OR

Explain Cohen-Sutherland Line Clipping Algorithm with Example.   CO 3

Q. 6.   Explain the z-buffer algorithm. What are the advantages and disadvantages of   CO 5

using a z-buffer algorithm?

OR

Explain the technique of Floating Horizon. Also explain Antialising and its   CO 5
techniques.