

Total No. of Questions: 09

B.Tech.(CSE) (2011 Onwards) (Sem. – 5)

COMPUTER GRAPHICS

M Code: 70537

Subject Code: BTCS-504

Paper ID: [A2100]

Time: 3 Hrs.

Max. Marks: 60

INSTRUCTIONS TO CANDIDATES:

1. **SECTION-A** is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

SECTION A

1. a) What is aspect ratio in display?
b) Explain Random Scan System.
c) Discuss about homogeneous coordinates.
d) What is shearing transformations?
e) What is the role of computer graphics in animation?
f) Write about windows and view port.
g) Discuss boundary fill algorithm.
h) What is scan line algorithm?
i) Define composite Transformations.
j) Define the Phong shading.

SECTION B

2. Explain about different circle drawing algorithms.
3. Differentiate parallel and perspective projections and derive their projection matrices.
4. Write a short note on Midpoint Ellipse Algorithm.
5. With suitable examples explain all 3D transformations.
6. How surfaces are sorted using Depth sort algorithm?

SECTION C

7. Give the syntax of drawing a line in computer graphics using various algorithms.
8.
 - a) Discuss hidden surface removal problem.
 - b) What is z buffer technique? Write the use of depth and frame buffer.
9.
 - a) Give the introduction of rendering technique for generating an image from 2D models.
 - b) What is the significance of formula in computer graphics Fractals?