

Roll No. _____

PGIIS-N 1550 B-16
M.Sc. IIIrd Semester Degree Examination
Computer Science
(Computer Graphics)
Paper : SCT 3.1
(New)

Time : 3 Hours

Maximum Marks : 80

Instructions to Candidates:

- 1) Section A is **compulsory**.
- 2) Answer any **five** questions form Section B.

Section - A

1. Answer the following questions. (10×2=20)
- a) What are basic shapes?
 - b) List different area filling attributes.
 - c) What are thick primitives?
 - d) Define homogeneous coordinates.
 - e) What is viewing pipeline?
 - f) Differentiate between parametric bicubic and quadric surfaces.
 - g) What are the important properties of user interface software?
 - h) What are the functions of two variables for visible surface determination?
 - i) Define octrees.
 - j) What are illumination models?

Section - B

2. a) Explain the human factors considered while designing an interactive program. (6)
b) What are the roles of light in solid modeling? Explain. (6)
3. a) What are the different circle drawing algorithm? Explain any one. (6)
b) How to generate filling patterns? Explain. (6)
4. a) Explain different 2D transformations. (6)
b) Discuss composition of 2D and 3D transformations. (6)
5. a) How to generate polygon mesh? Discuss. (6)
b) Explain quadric surfaces. (6)
6. a) Describe any one algorithm for visible line determination. (6)
b) Explain visible surface ray tracing. (6)
7. a) What are different shading models for polygons? Discuss. (6)
b) Define Transparency. How to generate it? Explain. (6)
8. Write short note on any **two** of the following : (2×6=12)
 - a) SRGP
 - b) Anti aliasing
 - c) Clipping lines
 - d) Area sub division algorithm.

