PVP 14

Code: IT6T2

III B.Tech - II Semester – Regular/Supplementary Examinations
AUGUST 2021

COMPUTER GRAPHICS AND ALGORITHMS
(INFORMATION TECHNOLOGY)

Duration: 3 hours Max. Marks: 70

PART – A

Answer *all* the questions. All questions carry equal marks

11x 2 = 22 M

1.

a) Discuss Applications of Computer graphics.
b) What is Aspect Ratio?
c) List some Input Devices.
d) Describe Pick operation.
e) What is Concatenation of Transformations?
f) Define 2D-Shear.
g) List types of parallel projections.
h) What is Normalized View Port.
i) What is Rasterization?
j) Define Point clipping.
k) Discuss Hidden–Surface Removal.

PART – B

Answer any *THREE* questions. All questions carry equal marks.

3 x 16 = 48 M

2. a) Describe output devices. 8 M

   b) Illustrate various Primitives and Attributes of OpenGL. 8 M

3. a) Demonstrate Logical classification of input devices. 8 M

   b) Give Primitive for Event Listener, Buttons, Menus and Sliders in OpenGL. 8 M

4. a) Derive matrix for basic 2D transformation in Homogeneous coordinates. 8 M

   b) Demonstrate Rotation about a Fixed Point in 2D-transformations. 8 M

5. a) Explain types of Projections. 8 M

   b) Derive matrix for General Perspective projection. 8 M

6. a) Explain Polygon Clipping. 8 M

   b) Describe Bresenham's Line Drawing Algorithm. 8 M