

Total No. of Questions – [08]

Total No. of Printed Pages- [02]

G.R. No.

paper code: U228-124 (RE-FF)

MAY 2019/ENDSEM RE-EXAM

S. Y. B. TECH. (COMPUTER) (SEMESTER - II)

COURSE NAME: COMPUTER GRAPHICS

COURSE CODE: CSUA22174

(PATTERN 2017)

Time: [2 Hours]

[Max. Marks: 50]

Instructions to candidates:

- 1) Answer Q.1, Q.2, Q.3, Q.4, Q.5 OR Q.6, Q.7 OR Q.8
- 2) Figures to the right indicate full marks.
- 3) Use of scientific calculator is allowed
- 4) Use suitable data where ever required

Q.1) a) Explain Bresenham's Circle Drawing Algorithm with evaluation of $d = 3 - 2r$. [6]

OR

b) Explain any three character generation Methods. [6]

Q.2) a) Write and explain scan line algorithm for polygon filling. [6]

OR

b) Explain Cohen-Sutherland Line clipping algorithm with example. [6]

Q.3) a) Explain rotation about an arbitrary point with its transformation matrix. [6]

OR

b) Explain Translation, Scaling & Rotation in 2D transformation. [6]

Q.4) a) Explain CIE chromaticity Diagram with example. [4]

OR

b) Define animation and morphing with one example each? [4]

Q.5) a) What do you mean by Diffuse illumination and Specular reflection? [6]

b) Explain Phong Shading Algorithm. [4]

c) Explain Warnock Area Subdivision Algorithm. [4]

OR

Q.6) a) Write and explain Painter's Algorithm. [6]

b) Explain Specular reflections with multiple light source. [4]

c) Explain Gouraud Shading Algorithm. [4]

Q.7) a) What are the various generations of NVIDIA? Explain any one. [6]

b) Explain Hilbert's Curve. [4]

c) Explain Bezier Curve. [4]

OR

Q.8) a) Explain OpenGL Architecture with example. [6]

b) Explain Triadic Koch Curve. [4]

c) What do you mean by Spline representation? [4]