F 3629 (Pages : 2) Reg. No.....4.....

Name.....

B.TECH. DEGREE EXAMINATION, NOVEMBER 2010

Seventh Semester

Branch—Computer Science and Engineering / I.T.

COMPUTER GRAPHICS (RT)

(Regular/Supplementary)

Time : Three Hours Maximum : 100 Marks

Answer **all** *questions.*

Part A

Each question carries 4 *marks.*

1. What are Interactive graphics system ?
2. Distinguish between Raster scan and vector scan display systems.
3. How does light-pen locate position on screen ?
4. What is the use of Windowing ?
5. Define Resolution and aspect ratio.
6. Explain Scaling and clipping.
7. Define Surface Rendering.
8. What is polygon-rendering method ?
9. Write the matrix form of the 3D rotation of a point through 30 degree in clock-wise direction about X-axis.
10. What are self-squaring Fractals ?

(10 × 4 = 40 marks)

Part B

Each question carries 12 *marks.*

11. Explain the construction and working of Graphics Display unit.

Or

12. How will you classify the display devices used in Computer Graphics ?
13. Translate a point (12, 7) by 5 in x direction and 5 in y direction; sale by 2 and 1 in x and y direction, and rotate by 30° in clockwise. Find the final co-ordinates.

Or

Turn over

14. Obtain the reflection of the diamond shaped polygon, whose vertics are A(–1, 0), B (0, – 2), C (and D(0, 2) about the line $y = x + 2$.

15. Enumerate and explain the 3D display methods.

Or

16. Explain the fundamental principles of 3D transformations.

17. Discuss the various methods of the visible surface detection algorithms.

Or

18. Explain the detailed principle of 3D rendering.

19. Explain the various animation techniques stressing Raster Animation and morphing methods

Or

20. How to classify the Fractal image and explain methods of Fractal generation ?

(5 × 12 = 60 mark