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**Question Paper Code: 31855**

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2016

Fifth Semester

Information and Technology

01UIT505 - GRAPHICS WITH OPENGL

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. Differentiate the functionalities of DDA and Bresenham's Line Drawing algorithms.
2. Define exterior text clipping with an example.
3. Define Bloppy Object.
4. What is Octree and explain with an example?
5. List various Animation techniques used in Graphics t.
6. What are the uses of a Chromaticity diagram?
7. How will you add Depth Buffer approach in OpenGL.
8. Illustrate the concept of Specular Reflection.
9. How will you manage Affine transformations in SDL?
10. List out the purpose of Mandelbrot set.

PART - B (5 x 16 = 80 Marks)

11. (a) Explain midpoint circle and ellipse drawing algorithms with symmetric points. (16)

Or

(b) List out various clipping techniques in graphics and explain cohen sutherland line clipping algorithms. (16)

12. (a) Describe Spline and Cubic Spline interpolation methods with an example. (16)

Or

(b) What is three dimensional viewing? Explain in detail with an example. (16)

13. (a) List and explain various color models. (16)

Or

(b) How will you use various primitives methods in Open GL. (16)

14. (a) (i) How the diffuse component is computed in a shading model? (8)

(ii) How shadows of objects are added? (8)

Or

(b) Explain how you will add objects to shadows using shadow buffer method. Illustrate with an example. (16)

15. (a) Illustrate how will you intersect rays with different shapes or objects like square, cylinder, cube and polygon. (16)

Or

(b) Describe mandelbrot set with an example using C programming. (16)