

(NO. OF PAGES: 2)

(FOR THE CANDIDATES ADMITTED

19 UIT 621

DURING THE ACADEMIC YEAR 2019 ONLY)

REG.NO. :

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI

END-OF-SEMESTER EXAMINATIONS : JULY 2022

B.Sc.IT

MAXIMUM MARKS: 75

VI - SEMESTER

TIME : 3 HOURS

PART - III

COMPUTER GRAPHICS

SECTION - A (10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.

MULTIPLE CHOICE QUESTIONS.

(K1)

1. The _____ displays (or emitters) are devices that convert electrical energy into light.
a) Emissive b) Non-emissive c) Liquid-Crystal d) None
2. _____ are used for three-dimensional positioning and selection operations in virtual-reality system.
a) Mouse b) Joysticks c) Trackballs d) Spaceballs
3. A two-dimensional _____ is applied to an object by repositioning it along a circular path in the xy plane.
a) Translation b) Rotation c) Scaling d) Circling
4. A _____ is a doughnut-shaped object.
a) Ellipsoid b) Sphere c) Torus d) Polygon
5. A _____ is an efficient method for determining object visibility by painting surfaces onto the screen from back to front.
a) Depth-Sorting b) Binary Space-Partitioning Tree
c) Area-Subdivision d) A-Buffer

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES

(K2)

6. Which device can be used to grasp a "virtual" object?
7. Define Ellipse.
8. What will be the output of a polygon clipper?
9. What are two basic projection methods?
10. What is mean by diffuse reflection?

(CONTD 2)

SECTION – B**(5 X 5 = 25 MARKS)****ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K3)**

11. a) Illustrate the concept Raster-scan display.

(OR)

b) What is meant by Input device? Explain the features of Keyboard.

12. a) Apply DDA algorithm for line drawing.

(OR)

b) Demonstrate the three basic Fill Styles of area-fill attributes.

13. a) Illustrate the reflection transformation for a 2D object.

(OR)

b) Examine the Window-To-Viewport Coordinate Transformation.

14. a) Write short notes on Quadric surfaces.

(OR)

b) Illustrate the translate transformation of three dimensional object.

15. a) Explain the basic concept of visible surface algorithm.

(OR)

b) Elaborate CMY Color Model.

SECTION - C**(4 X 10 = 40 MARKS)****ANSWER ANY FOUR OUT OF SIX QUESTIONS.****(16th QUESTION IS COMPULSORY AND ANSWER ANY THREE****QUESTIONS (FROM Qn. No : 17 to 21)****(K4 (Or) K5)**

16. Discuss the Bresenham's Line drawing algorithm.

17. Explain the functionality of Flat-panel displays.

18. Explain the attributes that can be set for entire character strings and for individual characters. Give example.

19. Write about Cohen-Sutherland Line clipping algorithm.

20. Explain the three dimensional rotation and scaling transformations.

21. Discuss the steps of Depth-Sort method.

