



SIDDHARTH GROUP OF INSTITUTIONS :: PUTTUR
Siddharth Nagar, Narayanavanam Road – 517583

QUESTION BANK (DESCRIPTIVE)

Subject with Code : Computer Graphics (18ME3017)

Course & Branch: M.Tech –CAD/M

Year & Sem: I- & II-Sem

Regulation: R18

UNIT –I

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| 1 | What are the features of computer graphics? Explain? | 12M |
| 2 | List and Explain the application of computer graphics? | 12M |
| 3 | Explain about the color CRT raster scan monitor? | 12M |
| 4 | Write about plasma panel displays and layers of plasma display? | 12M |
| 5 | a) What is meant by Computer Graphics | 4 M |
| | b) Discuss about liquid crystal display? | 8M |
| 6 | Define line line drawing algorithm? Explain | 12M |
| 7 | Explain the steps involved in DDA line algorithms? | 12M |
| 8 | Briefly explain the desirable characteristics of line drawing algorithms? | 12M |
| 9 | a) Discuss the properties of a line? | 6M |
| | b) Explain the bresenhams algorithms | 6M |
| 10 | a) Write briefly about the DDA | 6M |
| | b) Discuss the parallel line algorithms | 6M |

UNIT –II

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| 1 | Explain about the cohen Sutherland algorithm for line clipping? | 12M |
| 2 | Let R be a rectangular window whose lower left corner is at L(-3,1) and upper right hand corner is ar R(2,6) If the line segment is defined with two end points with A(-4,2) and B(-1,7) | 12M |
| | a) The region codes of the two points | |
| | b) Its clipping category and | |
| | c) Stages in the clipping operation using cohen-sutherland algorithm | |
| 3 | Explain about the filling algorithms? | 12M |

4	Write about polygon filling algorithm?	12M
5	Discuss about simple visibility algorithm?	12M
6	Explain about cohen-sutherland algorithm?	12M
7	Explain the steps involved in Sutherland- hodgeman algorithms?	12M
8	Briefly explain the desirable characteristics of line clipping algorithms?	12M
9	Discuss the significance of viewing function?	12M
10	Compare and contrast cohen-sutherland and Sutherland-hodgeman algorithm?	12M

UNIT -III

1	What is 3D clipping ? Give the advantages of clipping an object against the unit cube?	12M
2	A Triangle is defined by 3 vertices A(0,2,1),B(2,3,0),C(1,2,1).Find the final coordinates after it is rotated by 45 degrees around a line joining the point (1,1,1) and (0,0,0)	12M
3	Write 3D homogeneous matrix to rotate by 90 degrees about the line passing through(0,0,0) and (1,0,1)	12M
4	The pyramid defined by the coordinates A(0,0,0),B(1,0,0),C(0,1,0)and D(0,0,1) is rotated 45 degrees about the line L. That has the direction $V=J+K$ and passing through the point C(0,1,0) find the coordinates of rotated pyramid?	12M
5	Give the matrix form for the basic geometric transformation in 3d graphics?	12M
6	Write about the translation ,rotation ,scaling ,reflection transformation ?	12M
7	A Triangle is defined by 3 vertices A(0,2,1),B(2,3,0),C(1,2,1) find the final coordinates after it is rotated by 45 degrees around a line joining the point (2,2,2) and (1,1,1)?	12M
8	Perform a 45 degrees rotation of triangle A(0,0),B(1,1) c(5,2) a) about the point A and b) about the point B	12M
9	Write about the polygon clipping?	12M
10	a) Discuss about the Sutherland b) Explain the hodgeman algorithm?	6M 6M

UNIT -IV

1	Explain the steps involved in depth duffer algorithm?	12M
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| 2 | Discuss the scan -fine method and give the disadvantages and advantages? | 12 M |
| 3 | Explain about area sub division method? | 12M |
| 4 | Discuss briefly about the Z-buffer algorithm? | 12M |
| 5 | Explain about the octree method? | 12M |
| 6 | Write about the surface removal algorithm? | 12M |
| 7 | Assuming the Z- buffer algorithm allows 128 depth value level to be used how much memory would a 512x512 pixel display required to store the Z- buffer if the screne consist of 14 object what is the frame Buffer memory requirement? And explain types of surface for surface removal algorithm? | 12M |
| 8 | Explain about the octree method and write an algorithm for an octree representation? | 12M |
| 9 | Write about the hidden line removal algorithm? | 12M |
| 10 | Assuming the Z- buffer algorithm allows 256 depth value level to be used how much memory would a 512x512 pixel display required to store the Z- buffer and explain types of surface for surface removal algorithm? | 12M |

UNIT -V

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| 1 | What are the features of shading algorithm? Explain? | 12M |
| 2 | List and explain the application of shading algorithm? | 12M |
| 3 | Explain about the constant intensity algorithm? | 12M |
| 4 | Write about gourmand shading algorithm? | 12M |
| 5 | Discuss about comparison of shading algorithm? | 12M |
| 6 | Explain about shading algorithm? | 12M |
| 7 | Explain the phongs shading algorithms? | 12M |
| 8 | Briefly explain the desirable characteristics of shading algorithms? | 12M |
| 9 | Discuss the properties of shading? | 12M |
| 10 | a) Write briefly about the phongs shading algorithms | 6M |
| | b) Discuss the gourmand shading algorithm | 6M |