**Question Bank**

**Subject-Computer Graphics**

**Unit 3 and 4**

1: In Cohen-Sutherland line clipping algorithm, if the bitwise logical AND of the region codes is 0000, then line is

1. Visible
2. Not visible
3. A candidate for clipping
4. None of these

2: When projection lines perpendicular to the view plane, then such type of projection is called

1. Parallel
2. Perspective
3. Orthographic
4. Oblique

3) In orthographic projection, when the direction of projection makes equal angles with exactly two of principal axes, then such projection is called

1. Isometric
2. Dimetric
3. Trimetric
4. Cavalier

4) An area on a display device to which a window is mapped is called

1. Window
2. View-port
3. Monitor
4. Workstation

5) The region against which an object is to clipped is called

1. Clip Window
2. Clip View-port
3. Clip Area
4. Clip Region

Q6) The subcategories of orthographic projection are

1. cavalier, cabinet, isometric
2. cavalier, cabinet
3. isometric, diametric, trimetric
4. isometric, cavalier, trimetric

Q7) In the clipping algorithm of Cohen & Sutherland using region codes, a line is already clipped is the,

1. codes of the end points are the same
2. logical AND of the end points code is not 0000
3. logical OR of the end points code is 0000
4. logical AND of the end points code is 0000

Q8) In Sutherland-Hodgman algorithm for polygon clipping, assume P (present point) lies inside the window and S (previous point) lies outside the window. Then, while processing through that window boundary, we should

1. store the intersection point of the line PS (S’) only
2. store the points P and S’
3. store the point P only
4. store the points S and S’

Q9) Find the incorrect statement(s). A perspective projection produces realistic views.

1. A parallel projection preserves realistic dimensions.
2. A perspective projection preserves realistic dimensions.
3. A parallel projection gives realistic representations of 3-D objects.

Q10). Oblique projection with an angle of 45 to horizontal position is called as

1. a) Cabinate projection
2. b) Isometric projection
3. c) Cavalier projection
4. d) None of the above

Q11). Perform window to viewport transformation for the point (20,15) Assume that (Xvmin, Yvmin) is (0,0) ) (Xwmax.Ywmax) is (100,100) ; (Xvmin, Yvmin) is (5,5); (Xvmax,Yvmax) is (20,20). The value of x and y the Viewport is

1. x=4, y =4
2. x =3, y =3
3. x =8, y =7.25
4. x =3, y =4

Q12). A line with end point codes as 0000 and 0100 is

(a) Partially invisible

(b) Completely visible

(c) Trivially visible

(d) Completely invisible

Q13). Which of the following techniques is used in Midpoint Subdivision algorithm?

(a) Binary search

(b) Bubble sort

(c) Linear search

(d) Sequential search

Q14). Which of the following are transformations?

1. (a) Translation
2. (b) Rotation
3. (c) Shearing
4. (d) All of the above

Q15). If the direction of rotation is 'z' axis, then direction of positive rotation is:

(a) Y to Z

(b) Z to X

(c) X to Y

(d) Y to X

Q16). Maximum numbers of vanishing points that can appear in case of a 3-D object are

(a) 3

(b) 4

(c) 2

(d) 1

Q17) If (x,y) is a point inside the clipping window then it’s code according to the Cohen-Sutherland algorithm is…………

1. 0000
2. 0001
3. 1000
4. 1111

Q18) …………………..number of bits are used for representing each subregion of the Cohen-Sutherland line clipping algorithm.

1. 1
2. 2
3. 3
4. 4

Q19) If two bits are zeros and two bits are ones in a code of a subregion in Cohen-Sutherland line clipping algorithm the subregion is ……………………

1. Corner region
2. Middle region
3. Central region
4. None of these

Q20) In the Cohen-Sutherland line clipping algorithm, if the codes of the two points P and Q are 0000 and 0000 then the line segment joining the points P and Q will be ……………………….. the clipping window

1. Totally outside
2. Partially outside
3. Totally inside
4. None

Q21) In the Cohen-Sutherland line clipping algorithm, if the codes of the two points P and Q are 0101 and 0001 then the line segment joining the points P and Q will be ……………………….. the clipping window

1. Totally outside
2. Partially outside
3. Totally inside
4. None

Q22) In the Cohen-Sutherland line clipping algorithm, if the logical AND of the codes of the two points P and Q is 0000 then the line segment joining the points P and Q will be ……………………….. the clipping window

1. Totally outside
2. Partially outside
3. Totally inside
4. None

Q23) If XL, XR, YB, YT represent the four parameters of x-left, x-right, y-bottom and y-top of the clipping window and (x,y) is a point inside the window such that x > XL and x ≤ XR and YB ≤ y ≤ YT the the code of the point (x,y in Cohen-Sutherland algorithm is………………….

1. 1100
2. 1000
3. 1110
4. 0000

Q24) Sutherland-Hodgaman algorithm is used for \_\_\_\_\_\_\_\_\_\_\_

1. Line Clipping
2. Point Clipping
3. Polygon Clipping
4. Hybrid Clipping

Q25) Perspective projection is characterized by the

1. View plane alone
2. Direction of projection and the view plane
3. Center of projection and the view plane
4. Center of projection alone

Q26) Oblique projection is

1. An orthographic projection
2. A perspective projection
3. A parallel projection
4. Axonometric projection

Q27) Axonometric projection is

1. An orthographic projection
2. A perspective projection
3. An oblique projection
4. A multiview projection

Q28) Isometric projection is

1. An orthographic projection
2. A perspective projection
3. An oblique projection
4. A multiview projection

Q29) Cavalier projection is

1. An orthographic projection
2. A perspective projection
3. An oblique projection
4. A multiview projection

Q30) Multiview projection is

1. An axonmetric projection
2. A perspective projection
3. An oblique projection
4. A parallel projection

Q31) Dimetric projection is

1. An parallel projection
2. A perspective projection
3. An oblique projection
4. A multiview projection

Q32) Cabinet projection is

1. An orthographic projection
2. A perspective projection
3. An oblique projection
4. A multiview projection

Q33) An orthographic projection in which the direction of the projection is not parallel any of the three principal axes is called

1. Cavalier projection
2. Perspective projection
3. Oblique projection
4. Axonometric projection

Q34) An axonometric projection in which the direction of the projection makes equal angle with all the three principal axes is called

1. Cavalier projection
2. Perspective projection
3. Oblique projection
4. Isometric projection

Q35) An axonometric projection in which the direction of the projection makes equal angles with exactly two of the three principal axes is called

1. Cavalier projection
2. Dimetric projection
3. Oblique projection
4. Isometric projection

Q36) An axonometric projection in which the direction of the projection makes unequal angles with all the three principal axes is called

1. Cavalier projection
2. Dimetric projection
3. Trimetric projection
4. Isometric projection

Q37) This projection technique has the direction of projection perpendicular to the viewing plane, but the viewing direction is NOT perpendicular to one of the principle faces.

1. Orthographic Parallel Projection
2. Axonometric Parallel Projection
3. Oblique Parallel Projection

Q38) This projection technique does NOT have the direction of projection perpendicular to the viewing plane.

1. Orthographic Parallel Projection
2. Axonometric Parallel Projection
3. Oblique Parallel Projection

Q39) This projection technique has the direction of projection perpendicular to the viewing plane, and the viewing direction is perpendicular to one of the principle faces.

1. Orthographic Parallel Projection
2. Axonometric Parallel Projection
3. Oblique Parallel Projection

**2 marks**

|  |  |
| --- | --- |
| **Id** | **1** |
| Question | In the clipping algorithm of Cohen &Sutherland using region codes, a line which is already clipped is the, |
| A | codes of the end points are the same |
| B | logical AND of the end points code is not 0000 |
| C | logical OR of the end points code is 0000 |
| D | logical AND of the end points code is 0000 |
| Answer | D |
| Marks | 1 |
| Unit | 3 |

|  |  |
| --- | --- |
| **Id** | **2** |
| Question | In Cohen-Sutherland line clipping algorithm, if the bitwise logical AND of the region codes is 0000, then line is |
| A | Visible |
| B | A candidate for clipping |
| C | Not visible |
| D | None of these |
| Answer | B |
| Marks | 1 |
| Unit | 3 |

|  |  |
| --- | --- |
| **Id** | **3** |
| Question | Suppose that window has its lower left corner at (-2,-1) and its upper right corner at (3,2) state whether a line segment from (-1,0) to (1,1) is \_\_\_\_\_\_\_\_\_\_\_ |
| A | Totally visible |
| B | Totally Invisible |
| C | Partially visible |
| D | None |
| Answer | A |
| Marks | 2 |
| Unit | 3 |

|  |  |
| --- | --- |
| **Id** | **4** |
| Question | Suppose that window has its lower left corner at (-2,-1) and its upper right corner at (3,2) state whether a line segment from (1,3) to (1.6,1) is \_\_\_\_\_\_\_\_\_\_\_ |
| A | Totally visible |
| B | Totally Invisible |
| C | Partially visible |
| D | None |
| Answer | C |
| Marks | 2 |
| Unit | 3 |

|  |  |
| --- | --- |
| **Id** | **5** |
| Question | Suppose that window has its lower left corner at (-2,-1) and its upper right corner at (3,2) state whether a line segment from (-1.5,0) to (-5,-2) is \_\_\_\_\_\_\_\_\_\_\_ |
| A | Totally visible |
| B | Totally Invisible |
| C | Partially visible |
| D | None |
| Answer | C |
| Marks | 2 |
| Unit | 3 |

|  |  |
| --- | --- |
| **Id** | **6** |
| Question | Suppose that window has its lower left corner at (-2,-1) and its upper right corner at (3,2) state whether a line segment from (-3,1) to (4,1) is \_\_\_\_\_\_\_\_\_\_\_ |
| A | Totally visible |
| B | Totally Invisible |
| C | Partially visible |
| D | None |
| Answer | C |
| Marks | 2 |
| Unit | 3 |

|  |  |
| --- | --- |
| **Id** | **7** |
| Question | Suppose that window has its lower left corner at (-2,-1) and its upper right corner at (3,2) state whether a line segment from (-2,3) to (1,4) is \_\_\_\_\_\_\_\_\_\_\_ |
| A | Totally visible |
| B | Totally Invisible |
| C | Partially visible |
| D | None |
| Answer | B |
| Marks | 2 |
| Unit | 3 |

|  |  |
| --- | --- |
| **Id** | **8** |
| Question | Suppose that window has its lower left corner at (-2,-1) and its upper right corner at (3,2) state whether a line segment from (-1,3) to (4,0.5) is \_\_\_\_\_\_\_\_\_\_\_ |
| A | Totally visible |
| B | Totally Invisible |
| C | Partially visible |
| D | None |
| Answer | C |
| Marks | 2 |
| Unit | 3 |

|  |  |
| --- | --- |
| **Id** | **9** |
| Question | Suppose that window has its lower left corner at (-2,-1) and its upper right corner at (3,2) state whether a line segment from (2,3) to (4,1.5) is \_\_\_\_\_\_\_\_\_\_\_ |
| A | Totally visible |
| B | Totally Invisible |
| C | Partially visible |
| D | None |
| Answer | C |
| Marks | 2 |
| Unit | 3 |

|  |  |
| --- | --- |
| **Id** | **10** |
| Question | Suppose that window has its lower left corner at (-2,-1) and its upper right corner at (3,2) then 4 bit binary code for point (-3,1) and (4,1) is |
| A | 1010 and 0010 |
| B | 0001 and 0010 |
| C | 0001 and 1000 |
| D | 0001 and 1100 |
| Answer | B |
| Marks | 2 |
| Unit | 3 |

|  |  |
| --- | --- |
| **Id** | **11** |
| Question | Suppose that window has its lower left corner at (-2,-1) and its upper right corner at (3,2) then 4 bit binary code for point (-2,3) and (1,4) is |
| A | 1000 and 1000 |
| B | 0001 and 0010 |
| C | 1001 and 1000 |
| D | 1000 and 1100 |
| Answer | A |
| Marks | 2 |
| Unit | 3 |

|  |  |
| --- | --- |
| **Id** | **12** |
| Question | Suppose that window has its lower left corner at (-2,-1) and its upper right corner at (3,2) then 4 bit binary code for point (-1,3) and (4,0.5) is |
| A | 1000 and 0010 |
| B | 0001 and 0010 |
| C | 1000 and 0010 |
| D | 0001 and 0010 |
| Answer | C |
| Marks | 2 |
| Unit | 3 |

|  |  |
| --- | --- |
| **Id** | **13** |
| Question | Suppose that window has its lower left corner at (-2,-1) and its upper right corner at (3,2) then 4 bit binary code for point (2,3) and (4,1.5) is |
| A | 1000 and 0010 |
| B | 1001 and 0010 |
| C | 1001 and 1000 |
| D | 100 and 1100 |
| Answer | A |
| Marks | 2 |
| Unit | 3 |

|  |  |
| --- | --- |
| **Id** | **14** |
| Question | Suppose that window has its lower left corner at (-2,-1) and its upper right corner at (3,2) then 4 bit binary code for point (0,1.5) and (2.5,0) is |
| A | 1010 and 0010 |
| B | 0001 and 0010 |
| C | 0000 and 0000 |
| D | 0001 and 1100 |
| Answer | A |
| Marks | 2 |
| Unit | 3 |