

**Computer Graphics and Animation MCQ Questions and Answers**

**Unit:3 Clipping**

**Multiple Choice Questions and Answers**

1. The object space or the space in which the application model is defined is called?  
**(a) World Co-ordinate system**  
(b) Screen Co-ordinate system  
(c) World Window  
(d) Interface Window
2. What is the rectangle in the world defining the region that is to be displayed?  
(a) World Co-ordinate system  
(b) Screen Co-ordinate system  
**(c) World Window**  
(d) Interface Window
3. What is the name of the space in which the image is displayed?  
(a) World Co-ordinate system  
**(b) Screen Co-ordinate system**  
(c) World Window  
(d) Interface Window
4. The window opened on the raster graphics screen in which the image will be displayed?  
(a) World Co-ordinate system  
(b) Screen Co-ordinate system  
(c) World Window  
**(d) Interface Window**
5. Window defines :  
(a) Where to display  
**(b) What to display**

(c) Why to display

(d) None of these

6. Viewport defines :

**(a) Where to display**

(b) What to display

(c) Why to display

(d) None of these

7. In 2D viewing we have :

(a) 3D window and 2D viewport

(b) 3D window and 3D viewport

**(c) 2D window and 2D viewport**

(d) 2D window and 3D viewport

8. By changing the dimension of the viewport ,the ----- and -----of the objects being displayed can be manipulated.

(a) Number of Pixels and Image quality

(b) X Co-ordinate and Y Co-ordinate

**(c) Size and Proportions**

(d) All of these

9. Which of the following ports resembles the coordinates from the real-world system?

**(a) Window port**

(b) View Port

(c) Universal Port

(d) None of the above

10. The process of transforming a 2D world-coordinate object to device coordinates is termed as:

(a) Window to Viewport Transformation

(b) Viewing Transformation

(c) Windowing Transformation

**(d) All of the above**

11. Can we represent multiple scenes from a real-world coordinate system on the viewport? If yes, how?

**(a) By using multiple viewports**

(b) By using multiple window ports

(c) Both a. and b.

(d) No, we cannot represent multiple scenes from a real-world coordinate system on the viewport

12. Which of the following are true with respect to the Window Port in computer graphics?

(a) It represents real world coordinate system.

(b) A window port can be defined with the help of a GWINDOW statement.

(c) Window port is the coordinate area specially selected for the display.

**(d) All of the above**

13. The scale factor of viewport transformation for x co-ordinate is \_\_\_\_\_

**(a)  $S_x = (sv_{max} - sv_{min}) / (sw_{max} - sw_{min})$**

(b)  $S_x = (sv_{max} - sv_{min}) / (sw_{max} + sw_{min})$

(c)  $S_x = (sv_{min} - sv_{max}) / (sw_{max} - sw_{min})$

(d)  $S_x = (sv_{max} + sv_{min}) / (sw_{max} - sw_{min})$

14. For a 2d transformation viewing, in how many ways a clipping algorithm can be applied?

(a) 3

**(b) 2**

(c) 1

(d) 5

**Note: Two ways are: world-coordinate clipping and viewport clipping**

15. Which of the following co-ordinates are NOT used in 2d viewing transformation?

(a) modelling co-ordinates

(b) viewing co-ordinates

(c) **vector co-ordinates**

(d) device co-ordinates

16. The process of elimination of parts of a scene outside a window or a viewport is called \_\_\_\_\_ .

(a) cutting

(b) plucking

(c) **clipping**

(d) editing

17. Clipping in computer graphics is primarily used for -

(a) zooming

(b) copying

(c) **removing objects and lines**

(d) All of the above

18. Clipping is used for :

(a) The display small size image

(b) The display large size image

(c) **The display part of an image**

(d) All of these

19. Which is not a line clipping algorithm?

(a) NLN algorithm

(b) Cohen-Sutherland algorithm

(c) **Weiler-Atherton algorithm**

(d) All of these

20. The Cohen-Sutherland algorithm divides the two-dimensional space in how many regions?

(a) 4

(b) 8

(c) 9

(d) 23

21. The 4-bit code of the bottom-region among the nine regions divided using the Cohen-Sutherland algorithm?

(a) 0000

(b) 0010

**(c) 0110**

(d) 0101

22. According to the Cohen-Sutherland algorithm, where the line lies, if the 4-bit code of both ends is 0000, and also the logical OR gives 0000?

(a) Half outside half inside

**(b) Completely inside**

(c) Completely outside

(d) None of the above

23. Which vertex of the polygon is clipped first in polygon clipping?

(a) top right

(b) bottom right

(c) bottom left

**(d) top left**

24. In line clipping, the portion of line which is \_\_\_\_\_ of window is cut and the portion that is \_\_\_\_\_ the window is kept.

**(a) outside, inside**

(b) inside, outside

(c) exact copy, different

(d) different, an exact copy

25. 'Skala' is an example of which type of clipping?

(a) curve clipping

(b) point clipping

(c) polygon clipping

**(d) line clipping**

26. 'Vatti' clipping algorithm is used in \_\_\_\_\_

**(a) curve clipping**

(b) point clipping

(c) polygon clipping

(d) line clipping

27. The process of removal of hidden surfaces is termed as \_\_\_\_\_

(a) clipping

(b) copying

**(c) culling**

(d) shorting

28. How many types of basic polygons are present?

(a) 4

**(b) 2**

(c) 10

(d) 5

**Note: Types of polygon: concave polygon and convex polygon**

29. Which of the following part of a polygon is considered in a polygon clipping algorithm?

(a) Part which is both inside and outside the window

(b) Part which is outside the window

**(c) Part which is inside the window**

(d) Part which is neither inside nor outside the window

30. Which of the following polygon clipping algorithm can be used to clip a filled area?

(a) Sutherland Hodgman Clipping Algorithm

**(b) Weiler Atherton Clipping Algorithm**

(c) Vatti Clipping Algorithm

(d) Greiner Hormann Clipping Algorithm

31. In Weiler Atherton Clipping Algorithm which of the following is consider to clip a polygon?

(a) Polygon edges and Window boundaries

(b) Polygon Vertices

(c) Polygon Edges

**(d) Window boundaries**

32. Which of the following algorithm can be used to clip a self-intersecting polygon?

(a) Greiner Hormann Clipping Algorithm

(b) Weiler Atherton Clipping Algorithm

(c) Vatti Clipping Algorithm

**(d) Both Vatti and Greiner Hormann Clipping Algorithm**

33. Sutherland-Hodgman clipping is an example of \_\_\_\_\_ algorithm.

(a) Line clipping

**(b) Polygon clipping**

(c) Text clipping

(d) Curve clipping

34. Cohen-Sutherland clipping is an example of \_\_\_\_\_

(a) polygon clipping

(b) text clipping

**(c) line clipping**

(d) curve clipping

35. Sutherland-Hodgman is an example of \_\_\_\_\_

**(a) polygon clipping**

(b) text clipping

(c) line clipping

(d) curve clipping

36. The concept of line clipping is same as point clipping?

**(a) Yes**

(b) No

(c) Can be yes or no

(d) Can not say

37. One of the drawback of Sutherland-Hodgman algorithm is that it cann't produce \_\_\_\_\_ areas.

**(a) connected**

(b) multiple

(c) discrete

(d) circular

38. A Polygoan in which the line segment joining any two points within the polygon may not lie completely inside the

polygon, is called \_\_\_\_\_ polygon.

(a) Convex

**(b) Concave**

(c) Closed

(d) Complete

39. The process of selecting and viewing the picture with diffrentent views is called\_\_\_\_\_.

(a) Clipping

**(b) Windowing**

(c) Segmenting

(d) all of above

40. When a picture is displayed on the display device it is measeured in \_\_\_\_\_co-ordinate system.

(a) World



(b) **Physical device**

(c) Viewing

(d) Normalized

41. The region of a picture against which an object is to be clipped is called a

(a) **Clip Window**

(b) Segment

(c) Clip

(d) Viewport

42. The line is said to be interior to the clipping window if \_\_\_\_\_point(s) is/ are interior to the window.

(a) any line

(b) one end

(c) **both end**

(d) any two

43. The transformation which maps the viewing co-ordinates to normalized device co-ordinate is called \_\_\_\_\_.

(a) Viewing transformation

(b) translation

(c) **normalization transformation**

(d) homogeneous transformation

44. In cohen- sutherland subdivision line clipping algorithm, all bits in region code are zero if\_\_\_\_\_.

(a) **end point of a line lies within a clipping window**

(b) end point of a line lies to the left of the clipping window

(c) end point of a line lies to the right of the clipping window

(d) None of these

45. Which of the following is true with respect to Suther Hodge algorithm?

(a) It clips only concave polygons

- (b) It is more time consuming and complex
- (c) It may insert extra edges in resultant polygon**
- (d) None of these

46. Cohen Sutherland algorithm is based on \_\_\_\_\_.

- (a) Divide and Conquer Strategies**
- (b) Recursion
- (c) Incremental Strategy
- (d) Greedy Approach