

Computer Graphics and Animation MCQ Questions and Answers

Unit:4 Visible Surface Detection and Computer Graphics Algorithms

Multiple Choice Questions and Answers

1. In which type of visible-surface detection Algorithms visibility is decided point by point at each pixel position on the projection plane?
(a) Object-Space methods
(b) Image-Space methods
(c) A and B both
(d) None of these
2. Which is true for back-face detection?
(a) The back-face detection algorithm is always working well for all polyhedron
(b) The back-face detection algorithm always works for a concave polyhedron
(c) The back-face detection algorithm always works for a convex polyhedron
(d) All of these
3. In the back-face detection algorithm, If V is along the positive Z direction than polygon is back face if _____. (V = vector in viewing direction from eye, C = Plane constant)
(a) $C \geq 0$
(b) $C \leq 0$
(c) $C \geq 1$
(d) $C \leq 1$
4. Which of these is a visible surface detection algorithm?
(a) Back-face detection
(b) Back-face removal
(c) Ray tracing
(d) None of these
5. In the depth buffer method which buffer is/are used?
(a) Depth buffer
(b) Refresh buffer

(c) Frame buffer

(d) A and B both

6. Which surface algorithm is based on perspective depth?

(a) Depth comparison

(b) Z-buffer or depth-buffer algorithm

(c) Subdivision method

(d) Back-face removal

7. The painter algorithm are also called

(a) Depth sort algorithm

(b) Priority algorithm

(c) Both a & b

(d) None of these

8. The painter algorithm are based on the property of

(a) Polygon

(b) Frame buffer

(c) Depth buffer

(d) None of these

9. The painter algorithm were developed on

(a) 1972 by Newell

(b) 1972 by Evans

(c) 1974 by Cat mull

(d) None of these

10. The problem of hidden surface are

(a) Removal of hidden surface

(b) Identification of hidden surface

(c) Both a & b

(d) None of these

11. The surfaces that is blocked or hidden from view in a 3D scene are known as

(a) Hidden surface

(b) Frame buffer

(c) Quad tree

(d) None of these

12. The types of hidden surface removal algorithm are

(a) Depth comparison, Z-buffer, back-face removal

(b) Scan line algorithm, priority algorithm

(c) BSP method, area subdivision method

(d) All of these

13. Which surface algorithm is based on perspective depth

(a) Depth comparison

(b) Z-buffer or depth-buffer algorithm

(c) Subdivision method

(d) back-face removal

14. Why we need removal of hidden surface

(a) For displaying realistic view

(b) For determining the closest visible surface

(c) Both a & b

(d) None of these

15. Z -buffer algorithm are

(a) Simplest algorithm

(b) Complex algorithm

(c) Largest algorithm

(d) None of these

16. How many types of hidden surface algorithm are

(a) 1

(b) 2

(c) 3

(d) 4

17. The algorithm of hidden surface are

(a) Object-space method

(b) image-space method

(c) Both a & b

(d) None of these

18. The method which is based on the principle of comparing objects and parts of objects to each other to find which are visible and which are hidden are called

(a) Object-space method

(b) image-space method

(c) Both a & b

(d) None of these

19. In which year Z- buffer algorithm are described

(a) 1995

(b) 1974

(c) 1945

(d) 1981

20. The depth sorting method reforms surfaces sorting in_____ order of depth

(a) Increasing

(b) Decreasing

(c) Both a & b

(d) None of these

21. Scan lines are used to scan from

(a) Top to bottom

(b) Bottom to top

(c) Both a & b

(d) None of these

22. Which of the following are the 2d color models?

(a) RGB and CMK

(b) RGB and CMG

(c) RGB and CMYK

(d) All of the above

23. RGB color model is used for -

(a) Painting

(b) Sketching

(c) Printing

(d) Computer display

24. Which of the following color will generate with the intersection of three primary RGB colors?

(a) Green

(b) Dark red

(c) Dark blue

(d) White

25. The intersection of primary colors in the CMYK color model will generate the -

(a) Green

(b) White color

(c) Black color

(d) Dark red

26. CMYK model are used for

(a) Computer display

(b) Printing

(c) Painting

(d) None of these

27. The RGB model displays a much _____ percentage of the visible band as compared to CMYK.

(a) Lesser

(b) Medium

(c) Larger

(d) None of these

28. Color depth can be defined by _____ which can be displayed on a display unit.

(a) Bits per pixel

(b) Bytes per pixel

(c) Megabyte per pixel

(d) None of these

29. Each bit represent

(a) One color

(b) Two color

(c) Three color

(d) None

30. Color apparent in additive model are the result of

(a) Reflected light

(b) Transmission of light

(c) Flow of light

(d) None of these

31. Which of the following is not a color model?

(a) XYZ color model

(b) YIQ color model

(c) RGB color model

(d) ABC color model

32. Which color model is generally used in websites?

- (a) XYZ color model
- (b) YIQ color model
- (c) RGB color model**
- (d) CMY color model

33. Which color model is generally used in hardcopy devices?

- (a) XYZ color model
- (b) YIQ color model
- (c) RGB color model
- (d) CMY color model**

34. Which color model is generally used in television?

- (a) XYZ color model
- (b) YIQ color model**
- (c) RGB color model
- (d) CMY color model

35. In YIQ color model Y represented as :

- (a) Luminance**
- (b) Hue
- (c) Purity
- (d) Saturation

36. Which color model use subtractive process?

- (a) XYZ color model
- (b) YIQ color model
- (c) RGB color model
- (d) CMY color model**

37. In YIQ color model IQ stands for :

- (a) Luminance

(b) Chrominance

(c) Purity

(d) Saturation

38. Which among the below set of colors are generally known as the primary colors of light?

(a) White, Yellow, Blue

(b) Red, Green, Blue

(c) Red, Green, Black

(d) Black, White, Red