MODEL PAPER I 2016
PAPER CG (311)
(BCA PART-III)

Time Duration: 3:00 hrs **M.M. 50**

OBJECTIVE PART-I

The question paper contains 40 multiple choice questions with four choices and you have to pick the correct one (each carrying1/2 marks).

Q1. A parallel projection with 63.4 degree angle is known as:
(a) Orthographic (b) cavalier (c) cabinet (d) perspective

Q2. Raster scan system display a picture from a definition in a
(a) display file (b) frame buffer (c)display buffer (d) control grid

Q3. When the computer is not able to maintain operations and display bright spot on the screen,is:
(a) blinking (b) convolution (c) Antialiasing (d) flickering

Q4. TV broadcast is an example of:
(a) duplex (b) simplex (c) half duplex (d) full duplex

Q5. Aspect ratio is:
(a) ratio of height to width (b) ratio of width to height
(c) Max no. of pixels (d) none of these

Q6. What is the aspect ratio of a 300 x 500 in display?
(a) 3 : 5 (b) 5 : 3 (c) 1 : 1.66 (d) none of the above

Q7.Aliasing means:
(a) rendering effect (b) staircase effect (c) cropping effect (d) All

Q8. A 1024 x 1024 raster requires how many bits in a bit plane :
(a) 2^{18} (b) 2^{20} (c) 2^{24} (d) 2^{100}

Q9. In RGB model 110 shows which color:
(a) yellow (b) magenta (c) cyan (d) green

Q10. The slope of the line joining the points (2,5) and (4,7) is:
(a) 1 (b) 0 (c) 2 (d) 3

Q11. The Cohen Sutherland algo divides the entire region into how many sub regions:
(a) 4 (b) 6 (c) 8 (d) 9

Q12. If winding number of a point is non zero then the point lies…….. the polygon :
(a) outside (b) inside (c) on (d) anywhere

Q13. If Sx = Sy then
(a) no change (b) uniform change (c) enlarge object (d) reduce object

Q14. 2-D matrix representation for reflection of a point along y-axis is:
(a) $\begin{matrix} -1 & 0 \\ 0 & 1 \end{matrix}$ (b) $\begin{matrix} 1 & 0 \\ 0 & -1 \end{matrix}$ (c) $\begin{matrix} -1 & 0 \\ 0 & -1 \end{matrix}$ (d) $\begin{matrix} 1 & 0 \\ 0 & 1 \end{matrix}$

Q15. For recoloring of an area which algo is used :
(a) boundary fill (b) flood fill (c) scan line (d) shadow mask

Q16. Standard graphics software is:
(a) GKS (b)PHIGS (c) PHIGS + (d) all of the above

Q17 A homogenous coordinate system corresponding to N-Dimension coordinate system provides:
(a) N dimensions (b) N-1 dimensions (c) N+1 dimensions (d) N^2 dimensions

Q18. By using Cohen Sutherland algo find which line be partially inside partially outside to the window:
(a) 0010,0110 (b) 0000,0000 (c) 0001,0010 (d)0110,1010

Q19.Which is not a type of projection

(a) orthographic (b) oblique (c)quadmetric (d) isometric

Q20. In general, the aspect ratio is:

(a) 1 (b) less than 1 (c) more than 1 (d) negative

Q21. A parallel projection with 45 degree angle is known as:

(a) Orthographic (b) cavalier (c) cabinet (d) perspective

Q22. What is the aspect ratio of a 400 x 500 in display?

(a) 3 : 5 (b) 5 : 3 (c) 1 : 1.66 (d) none of the above

Q23. In RGB model 100 shows which color:

(a) yellow (b) magenta (c) cyan (d) red

Q24. By using Cohen Sutherland algo find which line be not completely outside to the window:

(a) 0010,0110 (b) 0000,0000 (c) 0001,0010 (d)0110,1010

Q25**.** Vector scan system displays a picture from a definition in a:

(a) buffer (b)display file structure (c)frame buffer (d) None of the above

Q26. The transformation that translates the object is:

(a)translation (b)shear (c)reflection (d) scale

Q27. If Sx = Sy then

(a) Uniform change (b)No change (c**)**enlarge object (d)reduce object

Q28. What is the aspect ratio of a 700 x 500 in display?

(a) 3 : 5 (b) 5 : 3 (c) 5:7 (d) none of the above

Q29. Polar coordinates for Cartesian coordinates(6,0)

(a) (6,0) (b) (4,45) (c) (6,90) (d) None of the above

Q30. Rotational transformation is a transformation for

(a) Rigid body object (b) Non rigid body object

(c) Both (a) & (b) (d) None of the above

Q31 . Translation path is a :

(a) linear (b)circular (c)conic (d) elliptical

Q32 . The Cohen Sutherland algo divides the entire region into how many segments:

(a) 9 (b) 6 (c) 8 (d) None

Q33. By using Cohen Sutherland algo find which line be completely inside to the window:

(a) 0010,0110 (b) 0000,0000 (c) 0001,0010 (d)0110,1010

Q34 In X direction shearing no change in:

(a)x direction (b) y direction

(c)both direction (d) None of the above

Q35. 2-D matrix representation for reflection of a point along y=0 is:

(a) $\begin{matrix} 0 & -1 \\ 1 & 0 \end{matrix}$ (b) $\begin{matrix} 1 & 0 \\ 0 & -1 \end{matrix}$ (c) $\begin{matrix} 0 & 1 \\ 1 & 0 \end{matrix}$ (d) $\begin{matrix} 1 & 0 \\ 0 & 1 \end{matrix}$

Q36. The point (15,40) with respect to window(2,5),(10,20) be:

(a) visible (b)clip (c)not defined (d) None of the above

Q37. Which is not a line clipping algo :

(a) Cohen Sutherland (b) Cyrus beak (c) Mid point subdivision (d) Sutherland Hodgeman

Q38. If upper left corner of a rectangle is(40,100) and length is 20 and width is 30 then find lower right corner of rectangle:

(a) (70,120) (b) (60,70) (c) (60,130) (d)None of these

Q39 2-D matrix representation for reflection of a point along y-axis is:

(a) $\begin{matrix} -1 & 0 \\ 0 & 1 \end{matrix}$ (b) $\begin{matrix} 1 & 0 \\ 0 & -1 \end{matrix}$ (c) $\begin{matrix} -1 & 0 \\ 0 & -1 \end{matrix}$ (d) $\begin{matrix} 1 & 0 \\ 0 & 1 \end{matrix}$

Q.40. The slope of the line joining the points (3,5) and (4,10) is:

(a) 1 (b) 0 (c) 2 (d) None

DESCRIPTIVE PART II

Attempt any four questions out of six. Each Question carries 7.5 marks.

Q1. (a). Explain Random scan and Raster scan display.
(b).Explain CRT

Q2. (a) Explain transformation in homogenous coordinate system.
(b) Explain sin -cos rotation.

Q3. (a).Explain Bresenham's line algo.
(b).Generate line between (5,10) and (15,18) by DDA algo.

Q4. Explain mid point ellipse generating algo.Find ellipse points when a=4 b=6.

Q5. (a). Explain Seed fill algos.
(b). Explain Polygon clipping.

Q6. (a). Explain Cohen Sutherland algo
(b). Explain types of projection.