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Reg. No. :

Code No. : 6841

Sub. Code : HCAM 32

M.C.A. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2013.

Third Semester

Computer Application

COMPUTER GRAPHICS

(For those who joined in July 2012 onwards)

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Interlacing refers to

- (a) Mixing of various shades on the graphics screen
- (b) Displaying alternate columns on the screen
- (c) Displaying alternate rows on the screen
- (d) Another term for refreshing the screen

2. One of the following terms is not associated with the field of computer graphics

- (a) Buttons
- (b) Deadlock
- (c) Icon
- (d) Fonts

3. Sometimes lines appear broken or show staircase effect on the screen as

- (a) The screen is not really flat
- (b) The line drawing algorithm allows only specific pixels to be put on
- (c) The algorithm is not efficient for slanting lines
- (d) There are numerical errors in calculation

4. Dragging in computer graphics is can be achieved through the following transformations

- (a) Translation
- (b) Rotation
- (c) Scaling
- (d) Mirror reflection

5. In 2D graphics [4 2 0] represent a point

- (a) Lying in infinity
- (b) (4, 2)
- (c) (4, 2) and also (2, 1)
- (d) Invalid representation

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6. The maximum number of control points for drawing B-spline curve is
- (a) 4 (b) 8
(c) 10 (d) Could be anything
7. The division displayed on screen into row and columns is known as
- (a) Rubber band method
(b) Gravity field
(c) Dragging
(d) Grid
8. Which one of the following transmits digital information to the computer?
- (a) Joystick (b) Mouse
(c) Graphics tablet (d) None of the above
9. Raster scan display means the screen is scanned
- (a) Top to bottom and right to left
(b) Bottom to top and right to left
(c) Bottom to top and left to right
(d) Left to right and top to bottom

10. Display resolution of typical monitor would be around
- (a) 200dpi (b) 60dpi
(c) 300 dpi (d) None of these

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions choosing either (a) or (b).

11. (a) What are the criteria that should be satisfied by a good line drawing algorithm.

Or

- (b) Write a note on raster scan display.

12. (a) Explain the procedure for applying translation to resize two dimensional object.

Or

- (b) Explain the raster function provided in graphics packages.

13. (a) What are blobby objects?

Or

- (b) Write a note on b-spline curve.



14. (a) Explain view window and view volume in 3-d transformation.

Or

- (b) Write a note on view port clipping.

15. (a) Explain painter's algorithm.

Or

- (b) Explain the concept of morphing.

SECTION C — ($5 \times 8 = 40$ marks)

Answer ALL questions choosing either (a) or (b).

16. (a) Explain DDA algorithm.

Or

- (b) Describe any five graphical input devices.

17. (a) Explain composite transformation under 2-D geometric transformation.

Or

- (b) Discuss about general considerations in structuring a user dialogue.

18. (a) Explain cubic spline interpolation method.

Or

- (b) Write a note on quadric surfaces in 3-D object representation.

19. (a) Discuss about three-dimensional viewing functions.

Or

- (b) Explain general parallel-projection transformation

20. (a) Explain back-face detection method.

Or

- (b) Explain any two polygon rendering methods.

