

2015

Time : 3 hours

Full Marks : 80

*Candidates are required to give their answers in their own words as far as practicable.*

*The figures in the margin indicate full marks.*

*Answer from both the Groups as directed.*

Group – A

**(Objective Type Questions)**

- Choose the correct answer of the following :  $2 \times 10 = 20$ 
  - Each screen point is referred to as \_\_\_\_\_ .
    - Resolution
    - Pixel
    - Persistence
    - Dot pitch
  - On a color monitor, the refresh buffer is also called \_\_\_\_\_.
    - Frame buffer
    - Pixmap
    - Bitmap
    - Display file

- Torus
- Superquadrics
- Superellipsoid

4. Implement the DDA algorithm to draw a line from (0, 0) to (4, 4).

5. Write short notes on the following :

- Picket fence problem
- Pixel phasing
- Super sampling process
- Unequal intensity

6. (a) What is segment and segment table ?

(b) Describe the animation process using segmentation.

7. (a) What is the difference between a window and a view port ?

(b) What is generalized clipping ?

8. (a) Compare parallel and perspective projection with reference to practical use only.

(b) Describe how a 3D object is presented on the screen using perspective projection.





- (c) \_\_\_\_\_ is the ratio of horizontal points to vertical points necessary to produce equal length lines in both direction.
- (i) Dot Pitch      (ii) Resolution  
 (iii) Aspect ratio      (iv) Height width ratio
- (d) Identify the odd one out from the following :
- (i) Frame Buffer      (ii) Pixmap  
 (iii) Display Program (iv) Refresh Buffer
- (e) The standard aspect ratio for PC is \_\_\_\_\_.
- (i) 6 : 5      (ii) 4 : 3  
 (iii) 3 : 2      (iv) 5 : 3
- (f) Lower persistence phosphorus needs \_\_\_\_\_ refresh.
- (i) Lower      (ii) Higher  
 (iii) Medium      (iv) None of these
- (g) Identify the odd one out from the following :
- (i) Vector display  
 (ii) Raster scan display  
 (iii) Calligraphic display  
 (iv) Stroke-writing display
- (h) Vector display is well suited for \_\_\_\_\_.
- (i) Animation

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Contd.

- (ii) Line drawing application  
 (iii) Cartoons  
 (iv) All of the above
- (i) DVST stands for \_\_\_\_\_.
- (i) Digital view storing table  
 (ii) Direct visual storage tube  
 (iii) Direct view storage tube  
 (iv) Digital view storage tube
- (i) Write an example for non-emissive displays :
- (i) LED  
 (ii) LCD  
 (iii) Gas Discharge Tube  
 (iv) Plasma Panel
- Group - B**
- (Long-answer Type Questions)**
- Answer any **four** questions of the following :
- 15×4 = 60
2. (a) What do you mean by image depth ?  
 (b) Define Pixel and Pixel Value.
3. (a) Write short notes on the following :
- (i) Ellipsoid

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(Turn over)