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3 (Sem-6/CBCS) CSC HC 2

2022

COMPUTER SCIENCE

(Honours)

Paper : CSC-HC-6026

(Computer Graphics)

Full Marks : 60

Time : Three hours

The figures in the margin indicate full marks for the questions.

1. Define the following terms : **(any seven)**

1×7=7

(i) Frame buffer

(ii) pixel

(iii) Resolution

(iv) Aspect ratio

(v) CRT

(vi) Window

(vii) Clipping

(viii) Scaling

(ix) LED

(x) LCD

Contd.

2. Answer the following question : **(any four)**
2×4=8

- (i) What do you mean by emissive display ?
- (ii) What is computer graphics ?
- (iii) What do you mean by animation ?
- (iv) What is scan conversion in computer graphics ?
- (v) Explain briefly about zooming.
- (vi) What do you mean by translation ?
- (vii) What is viewing transformation ?
- (viii) What do you mean by RGB ?

3. Answer the following questions as directed :
(any three) 5×3=15

- (i) Write the essential application of computer graphics.
- (ii) Write the difference between random scan and raster scan display.
- (iii) Explain the boundary filled algorithm.
- (iv) Explain the working principle of CRT.

(v) Explain the window to viewport transformation.

(vi) What are different 3-D geometric transformations? Explain.

(vii) Why is homogeneous co-ordinate system used in computer graphics ?

(viii) What do you mean by rotation ? Explain it.

4. Answer the questions as directed :
(any three) 10×3=30

(i) Explain the DDA algorithm with its advantages and disadvantages.

(ii) Explain midpoint circle algorithm.

(iii) Explain Cohen-Sutherland line clipping algorithm.

(iv) Explain different text clipping strategies.

(v) Explain parallel projection and perspective projection. 5+5=10

(vi) Explain about reflection technique.

(vii) Explain about various applications of animation.

(viii) What is flat panel display? Explain its advantages and disadvantages.