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	*(vii)*	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.

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