No. of Printed Pages—3

527 (ICG)

[20–HBGPOW–D5S(O)21A]

BCA 5th Semester (Old) Exam., 2020 (W)

BCA

[BCA 17]

(Interactive Computer Graphics)

Full Marks : 80

Time : 3 hours

The figures in the margin indicate full marks for the questions

1. Answer the following questions : 1×8=8

(a) What is a pixel?

(b) What is rasterization?

(c) What is clipping?

(d) Define computer animation.

(e) Give two applications of computer graphics.

(f) Name any two animation softwares.

(g) Give the matrix representation for scaling in 3D transformation.

(h) Give the equation for a circle.

2. Answer the following questions : 2×8=16

(a) What are the different types of flat panel display?

(b) Give two advantages of the Bresenham's line drawing algorithm.

(c) What is perspective fare shortening?

(d) What is the exaggeration principle in animation?

(e) What is morphing?

(f) Describe the RGB color model.

(g) What is shear transformation?

(h) Give two disadvantages of beam penetration method.

3. Answer any *five* from the following questions : 4×5=20

(a) Briefly discuss any four applications of computer animation.

(b) Describe the different types of parallel projections.

(c) Describe the process how 2-D scaling is done on an object.

(d) Describe the two approaches for filling polygons.

(e) What is the purpose of GUI? What are the three major components of GUI?

(f) Describe the working of liquid crystal display (LCD).

4. Answer any *two* from the following questions : 8×2=16

(a) Describe the working of random scan display and raster scan display.

(b) Describe how the DDA line drawing algorithm works.

(c) What are the advantages of using homogeneous coordinate representation? How are coordinates represented in this system?

5. Answer any *two* from the following questions : 10×2=20

(a) What are the different types of clipping? Describe any one method for text clipping. 3+7=10

(b) Describe the different types of animation.

(c) Describe how the boundary fill algorithm works.

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