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BCACAC 260

**Credit Based Fourth Semester B.C.A. Degree Examination, May/June 2016
(New Syllabus) (2013-14 Batch Onwards)
COMPUTER GRAPHICS AND MULTIMEDIA**

Time : 3 Hours

Max. Marks : 80

Note : Answer **any ten** questions from Part – A and **any one full** question from **each** Unit in Part – B.

PART – A

(10×2=20)

1. a) What are horizontal and vertical retrace ?
- b) Define aspect ratio.
- c) Expand GKS and PHIGS.
- d) Draw 8-connected and 4-connected pixels.
- e) List any four character attributes.
- f) What is a rigid body transformation ? Give example.
- g) Write matrices to represent rotation and scaling in homogeneous co-ordinate system.
- h) What is interactive media ?
- i) What is morphing ?
- j) List the components of MIDI envelop.
- k) What is 2-D animation ?
- l) What is overscan and underscan ?

PART – B

Unit – I

2. a) Explain the architecture of Vector display system with neat diagram.
- b) Write DDA line drawing algorithm.
- c) Write a note on flood fill algorithm.

(5+5+5)

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3. a) Derive Mid-point algorithm to draw an ellipse.
b) Write a note on graphics standards. (10+5)

Unit – II

4. a) Explain general pivot-point rotation with a suitable diagram. Derive the composite matrix for the same.
b) Explain curve attributes in detail.
c) Write an explanatory note on homogeneous co-ordinate system. (6+5+4)
5. a) Explain the procedure of Sutherland-Hodgeman polygon clipping along with suitable diagrams.
b) List the various basic 2-dimensional transformations and explain any one in detail.
c) Write a note on pattern fill. (6+5+4)

Unit – III

6. a) Write application of multimedia in various fields.
b) Write any 5 editings in digital recordings.
c) List the drawbacks of MIDI. (5+5+5)
7. a) List and explain different attributes of font.
b) Write steps involved to bring an audio recording into multimedia project.
c) Write a note on bitmaps. (5+5+5)

Unit – IV

8. a) Give some suggestions for creating good titles for video.
b) List and explain different types of authoring tools for multimedia.
c) Write a note on MPEG. (6+5+4)
9. a) Explain how Digital Video is recorded ?
b) List and explain different stages of a multimedia project.
c) Write a note on computer animation. (5+5+5)