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SARDAR PATEL UNIVERSITY

SC

B.C.A Examination, 5th Semester (CBCS) (REGULAR)

Wednesday, 18 March 2015

10.30 am – 1.30 pm

Course Code: US05CBCA02

Course Title : Computer Graphics **Total Marks: 70**

Q1. Multiple Choice Questions. **[10]**

1. The ratio of vertical points to horizontal points necessary to produce equal length lines in both direction is called_____.
   a. Pixel b. Aspect ratio
   c. Persistence d. Resolution
2. Control grid in CRT is responsible for change in _____.
   a. Brightness b. Reflection
   c. Deflection d. Focusing angle
3. _____ technique is used to modify or interpret existing pictures.
   a. Computer Art b. GUI
   c. Visualization d. Image Processing
4. In a four-level gray scale color system, Intensity of white color is _____.
   a. 0 b. 0.33
   c. 0.67 d. 1
5. In Odd-Even rule point is exterior, if the number of polygon edges cut it is an _____ number.
   a. Odd b. Even
   c. Zero d. Natural
6. A _____ is a transformation that produces a mirror image of an object.
   a. Rotation b. Scaling
   c. Reflection d. Translation
7. The region against which an object is to be clipped is called a _____.
   a. Window b. Viewport
   c. Viewmap d. Clip window
8. Default frame rate in FLASH is _____ fps.
   a. 30 b. 60
   c. 12 d. 120
9. _____ animations are indicated by a black dot at the beginning keyframe; intermediate tweened frames have a black arrow with a light-blue background.
   a. Motion Guide b. Motion Tween
   c. Shape Tween d. Frame by Frame
10. Default background color of the stage in FLASH is _____.
    a. Blue b. Black
    c. Green d. White

Q2. Answer the following short questions (Attempt any TEN) **[20]**

1. Define the term: Resolution.
2. State disadvantages of beam penetration method used in color monitors.
3. List 2 examples each of impact and non-impact printers.
4. Differentiate between : Bitmap and Outline fonts
5. List different types of joins and caps used for displaying thick line segments.
6. Explain Boundary Fill algorithm using 4 connected approach.
7. Define : 1. Window 2. Viewport.
8. What is clipping ? State the necessary condition for point clipping.
9. What is Geometric Transformation? List out all geometric transformations?
10. Define : 1. Frame 2. Guided Motion.
11. What is a Keyframe ? Also give shortcut key to insert a keyframe.
12. Explain geturl action to control browser network.

Q3.a. Write a detailed note on applications of Computer Graphics. **[6]**

b. Explain any one technique used in color monitors in detail. **[4]**

OR

Q3.a. Explain working of CRT with labeled diagram. **[6]**

b. Explain DVST in detail. **[4]**

Q4.a. Write steps for Bresenham line drawing algorithm. **[6]**

b. Write a note on line attributes. **[4]**

OR

Q4.a. Write steps for mid-point circle generation algorithm. **[6]**

b. State purpose of inside-outside test? Expiain any one method for the same. **[4]**

Q5.a. Explain Rotation transformation in detail. **[6]**

b. Explain Cohen Sutherland line clipping algorithm. **[4]**

OR

Q5.a. Explain Reflection transformation in detail. **[6]**

b. What is text clipping? List various techniques of text clipping and explain them with example. **[4]**

Q6. Explain toolbox of flash in detail. **[10]**

OR

Q6. Explain following animations in FLASH with example: **[10]**

i) Motion Tween ii) Mask animation