

**SIXTH SEMESTER B.C.A. DEGREE EXAMINATION
MARCH 2014**

(UG-CCSS)

Core Course

CA 6B 14 – COMPUTER GRAPHICS AND MULTIMEDIA

Time : Three Hours

Maximum : 30 Weightage

I. Answer all *twelve* questions :

1. ~~_____ is an example of raster~~ scan device.
2. A special purpose processor called _____ is used to control the operation of the display device.
3. ~~_____ display device is constructed~~ by filling the region between two glass plates with a mixture or gases that usually includes neon.
4. Given $x = x_1$ and a scaling factor S_x , the new x co-ordinate value $x_1 =$ _____
5. ~~_____ is a line clipping~~ algorithm.
6. Say True or False : Two successive rotations $R(O_1)$ followed by $R(O_2)$ is equivalent to $R(O_1 + O_2)$.
7. ~~_____ is an example of audio~~ file format.
8. ~~_____ is an example of multimedia~~ authoring tool.
9. The effect in which one image transforms into another is known as _____
10. **CCD** stands for _____
11. **MPEG** is a _____ compression standard.
12. ~~_____ is any combination~~ of text, graphic art, sound, animation and video delivered to you by computer or other electronic means.

(12 x = 3 weightage)

II. Answer all *nine* questions :

13. Differentiate random and raster scan systems.
14. Write the basic principle or LCD.
15. What do you mean by homogeneous co-ordinate systems?

• Turn over

16. Write the equation for window-to-view port transformation.
17. Write any *four* properties of multimedia systems.
18. Write any *four* image processing operations.
19. What do you mean by a multimedia authoring tool?
20. Define Entropy.
21. Write advantages of optical storage media.

(9 x 1 = 9 weightage)

III. Answer any *five* questions :

22. Explain **DDA** algorithm.
23. Obtain matrix formulation for 2D rotation.
24. Write a note on data stream characteristics.
25. Write a note on video file formats.
26. Explain the basics of computer based animation techniques.
27. Discuss any *four* graphic input devices.
28. Explain the basics of data compression.

(5 x 2 = 10 weightage)

IV. Answer any *two* questions :

29. Write and explain **Bresenham's** circle drawing algorithm. Illustrate with suitable example.
30. Write and explain any *one* polygon clipping algorithm. Illustrate with suitable example.
31. Give a detailed account of **JPEG**.

(2 x 4 = 8 weightage)