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 $R(0_1)$ followed by $R(0_2)$ is equivalent to $R(0_1 + 0_2)$.

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 Bresenharns 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)