MCA DEGREE EXAMINATIONS: NOV/DEC 2010
Third Semester
MASTER OF COMPUTER APPLICATION

MCA 513: Computer Graphics & Multimedia Systems

Time: Three Hours   **Maximum Marks: 100**
Answer ALL Questions:-
PART A (10 x 2 = 20 Marks)

1. Define a color model.
2. Define a display file.
3. Define affine transformation.
4. What is a shear?
5. Define rendering.
6. What is depth cueing?
7. What comprises of multimedia?
8. Define computer animation.
9. List out the tools for Virtual Reality.
10. What is a composite video?

PART B (5 x 16 = 18 Marks)

11. a) Explain the basic concept of Midpoint circle algorithm. Derive the decision parameter
       for the algorithm and write down the algorithm steps.   **(OR)**
   b) (i) Explain interactive input methods.   (8)
      (ii) Discuss polygon clipping algorithm.   (8)

12. a) Describe the features of VGA card and how this is used in a computer.   **(OR)**
    b) (i) Explain Cohen Sutherland line clipping algorithm in detail.   (10)
       (ii) Write notes on text clipping   (6)

13. a) (i) Explain 3D basic transformation with an example.   (10)
       (ii) Explain the rendering technique for drawing a line.   (6)
                                    (OR)
    b) (i) Explain Gauraud shading technique and write deficiencies in that method and how it is
          rectified using Phong shading technique.   (10)
       (ii) Briefly explain the parallel and perspective projections.   (6)

14. a) List different type of authoring tool and explain briefly with its merits and demerits. (16)
                                    (OR)
    b) Explain in detail how MIDI plays an important role in Music.

15. a) (i) List the Multimedia applications. Explain them briefly.   (12)
        (ii) Write short notes on synchronization issues in multimedia.   (4)
                                    (OR)
    b) Write notes on
       (i) Virtual reality   (8)
       (ii) Image information system.   (8)

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