Roll No. .....

67141

MCA 3rd Semester (New) with new notes full and re-appear candidates Examination– December, 2013

COMPUTER GRAPHICS AND MULTIMEDIA

Paper MCA-301

Time : 3 hours ***Max. Marks : 80***

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard will be entertained after the examination.

Note : **Question No. 1 is compulsory** with 8 parts, carrying 2 marks each. Attempt any **four** more questions, selecting **one** question from each Unit (Unit I to 4).

1. (i) Define the term Interlacing. 2

(ii) Draw the labeled diagram of Delta-Delta Operation used in Color CRT. 2

(iii) Name any four popular Graphics software. 2

(iv) Define the term Non emissive devices. 2

(v) Briefly describe the purpose of Color Look-up table used in Graphics. 2

(vi) List down various components of Hyper Media. 2

(vii) Write down the condition which is checked for Point clipping. 2

(viii) What do you mean by emissive displays ? 2

UNIT - I

2. Differentiate between :

(a) Passive and Interactive Graphics 8

(b) Graphics Workstation and Graphics Terminal 8

3. (i) Why Phosphorus is an integral part of CRT ? Explain the working of CRT with the help of labeled diagram. 8

(ii) Why Raster Scan Systems are preferred in scientific applications than Random Scan ? List its various features and requirements. 8

UNIT - II

4. Describe the working principle of Bresenham Scan Conversion Line Algorithm. Also set up an algorithm that can generate straight lines for any slope. 16

5. How bundled attributes enhance the graphics and also discuss the use of Super Sampling approach. 16

UNIT - III

6. Why Transformations are important in creating Real Time Graphical Projects ? Explain any two rigid body transformations with their applications. Also show that the Transformation Matrix (5, -51), for a reflection about the line y = x, is equivalent to a reflection relative to the x-axis followed by a counter clockwise rotation of 90°. 16

7. Compare the number of Arithmetic operations performed in the Cohen Sutherland and liang barsky line clipping algorithms for any line orientation relative to a clipping window. 16

UNIT - IV

8. Explain :

   (i) Classification of Multimedia 4

   (ii) Challenges for M/Media 4

   (iii) Hardware Requirements for M/Media 4

   (iv) Audio Play backings 4

9. (i) How Animation plays an incredible in Education, Medical and Business World ? 6

   (ii) Differentiate between Authoring and presentation process along with their working. 10
