Roll No. .....

67141

M.C.A. 3rd Sem. (with new notes) (Current Scheme)

Examination–December, 2014

Computer Graphics & 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 by selecting at least **one** question from each.

8×2 = 16

1. (a) What do you mean by presentation graphics ?

(b) Explain the purpose of refresh buffer in random systems.

(c) Write the formula for decision parameter used in line drawing algorithm

(d) Describe the pixel phasing technique used for anti aliasing

(e) Write down the homogeneous co-ordinates for shearing transformation

(f) Define vanishing point

(g) What do you mean by frame rate in animation ?

(h) Define gray scale levels

Unit-I

2. (a) Which type of computer graphics is best suitable for creating scientific applications ? Explain. *8*

(b) How computer graphics can assist the Mathematicians ? *8*

3. Define : *4 × 4 =16*

(a) Stereoscopic view

(b) Deflection coils (CRT)

(c) Nematic liquids

(d) Display Co processor

Unit-II

4. (a) Write short note on various output primitives used in graphics. 4

   (b) How and where inside-outside tests are used ? Explain with an example. 8

   (c) What is super sampling ? 4

5. Explain any 8 inbuilt functions used for setting the output attributes. Also differentiate between tint fill and fill area. 16

Unit-III

6. (a) Why translation can be stated as rigid body transformation ? Support your answer with an example. 7

   (b) Describe the matrix for uniform scaling. 2

   (c) Write down the matrix representation for compound transformation including translation, rotation and scaling. 7

7. (a) Why window to viewport transformations are integral part of computer graphics ? Explain how it is achieved in terms of pipeline and mathematical expressions. 6

(b) Explain the Liang Barsky Line Clipping algorithm. *10*

Unit-IV

8. (a) Explain the criteria on which multimedia systems are classified. Also describe various types of multimedia systems. *5*

(b) Describe various components which are integral part of any multimedia. *5*

(c) Illustrate significance of authoring tools in multimedia systems. *6*

9. Explain : *4 × 4 = 16*

(a) Play backing

(b) Morphing

(c) Hyper text

(d) Hardware & software requirements (M/M)
