

C 6157

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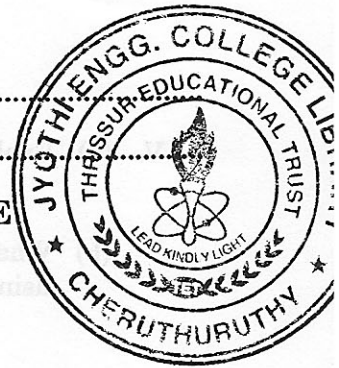
Name.....

Reg. No.....

**SIXTH SEMESTER B.TECH. (ENGINEERING) DEGREE  
EXAMINATION, JUNE 2010**

**CS 04 606—COMPUTER GRAPHICS AND MULTIMEDIA**

(2004 admissions)



Time : Three Hours

Maximum : 100 Marks

*Answer all questions.*

- I. (a) What are affine transformations ? Give examples.  
(b) Explain how characters are generated using bit maps.  
(c) Derive the transformation matrix for parallel projection.  
(d) Describe the characteristics of locator devices and pick devices.  
(e) Define Multimedia based on its properties. Explain the differences between multimedia and other systems.  
(f) What is the goal of speech transmission system ? What are its components ? Explain.  
(g) What is a Database model ? What are its types ? Explain.  
(h) Explain the following encoding schemes :  
(i) Run length encoding.  
(ii) Transformation encoding.  
(8 × 5 = 40 marks)
- II. (a) Find the raster units of a circle whose center is at the origin and radius 6 units using mid-point scan conversion algorithm.  
*Or*  
(b) (i) What are shear transformations ? What are its types ? Explain. (6 marks)  
(ii) Write the procedures for generating Polylines ; Markers ; Polymarkers. (9 marks)
- III. (a) Classify Interaction tasks. Explain using examples.  
*Or*  
(b) Derive the transformation matrix for performing 3D rotation about an arbitrary axis. (15 marks)
- IV. (a) (i) Define Multimedia. Explain the characteristics of different types of media. (10 marks)  
(ii) Discuss the issues related to computer based animation. (5 marks)  
*Or*  
(b) (i) Describe the properties of interactive Graphics system. (6 marks)  
(ii) Discuss the issues related to speech analysis. (9 marks)

Turn over

V. (a) Explain the steps of JPEG compression process.

Or

(b) What are the components of DVI ? Explain compression and decompression of information using DVI.

(15 marks)

[4 × 15 = 60 marks]