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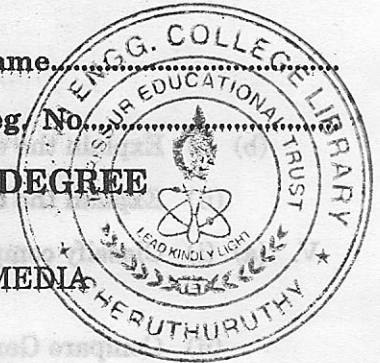
Name.....

Reg. No.....

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

CS 04 606—COMPUTER GRAPHICS AND MULTIMEDIA

(2004 Admissions)



Time : Three Hours

Maximum : 100 Marks

Answer all questions.

- I. (a) What are the different ways of generating characters ? Explain.
- (b) What is a view port ? Write the sequence of transformations for converting window co-ordinates into a view port.
- (c) Classify parallel projection. Briefly explain each type.
- (d) Describe the characteristics of locator devices and valuator devices.
- (e) Describe the characteristics of Perception medium and Representation medium.
- (f) Explain the processing chain of interactive computer music system.
- (g) Using an example, explain the compression technique based on interpolation and subsampling.
- (h) List the layers that comprise the video data stream in MPEG and explain their function.

(8 × 5 = 40 marks)

- II. (a) Find the raster units of a line whose end points are (-4, -2) and (1, 3) using mid point line scan conversion algorithm.

(15 marks)

Or

- (b) (i) Derive the transformation matrix for rotating and scaling an object about an arbitrary point.

(10 marks)

- (ii) What is a polyline ? Write the function for generating a polyline and explain. (5 marks)

- III. (a) Explain the various spatial-partitioning representation. (15 marks)

Or

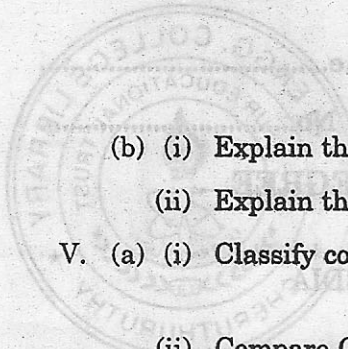
- (b) Explain the working of any *three* 3D interaction devices. (15 marks)

- IV. (a) (i) Describe the features of various transmission modes. (8 marks)

- (ii) Discuss the issues related to web-based animation. (7 marks)

Or

Turn over



- (b) (i) Explain the steps involved in Image Recognition. (8 marks)
- (ii) Explain the different ways of generating speech. (7 marks)
- V. (a) (i) Classify compression techniques. Explain the steps involved in data compression. (9 marks)
- (ii) Compare General purpose and Multimedia Data base Management systems. (6 marks)

Or

- (b) Describe the characteristics of MPEG-2. (15 marks)
- [4 × 15 = 60 marks]

- (d) What is a view port? Write the sequence of transformations for converting window co-ordinates into a view port.
- (c) Classify parallel projection. Briefly explain each type.
- (d) Describe the characteristics of locator devices and vibrator devices.
- (e) Describe the characteristics of Perception medium and Representation medium.
- (f) Explain the processing chain of interactive computer music system.
- (g) Using an example, explain the compression technique based on interpolation and subsampling.
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- (b) Explain the working of any three 3D interaction devices. (15 marks)
- IV. (a) (i) Describe the features of various transmission modes. (8 marks)
- (ii) Discuss the issues related to web-based animation. (7 marks)

Or