C 46567   (Pages : 2)   Name.....................

Reg. No.....................

EIGHTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION, JUNE 2008

CS 2K 802—COMPUTER GRAPHICS AND MULTIMEDIA

Time : Three Hours   Maximum : 100 Marks

Answer **all** *questions.*

Part A

I. 1 Explain *two* basic techniques for defining characters.

2 Discuss basic incremental algorithm for scan conversion of lines.

3 Distinguish between Synchronous and Asynchronous transmission mode.

4 Define sampling rate and quantization.

5 List out limitations of CD-ROM technology.

6 Mention major steps of data compression.

7 What are channel messages ?

8 What are contents present in a motion video sequence ?

(8 × 5 = 40 marks)

Part B

II. (a) Discuss in detail about position interaction tasks.

Or

(b) (i) Given a cube with one corner (0, 0, 0) and opposite corner at (1, 1, 1). Derive the transformations necessary to rotate the cube by a degrees about main diagonal from (0, 0, 0) to (1, 1, 1) in the counterclockwise direction when looking along diagonal towards the origin.

(9 marks)

(ii) An object is to be scaled by a factor S in the direction whose direction cosines are (α, β, γ). Derive transformation matrix.

(6 marks)

III. (a) (i) Discuss in detail about the properties of a multimedia system.   (8 marks)

(ii) List out the peculiarities that arise when using a WORK disk.   (7 marks)

Or

(b) Explain various protocols that support multimedia transmission in transport layer.

(15 marks)

IV. (a) (i) Write short notes on dithering.   (8 marks)

(ii) Explain the various approaches of colour encoding.   (7 marks)

Or

Turn over

(b) (i) Discuss in detail about various animation languages. (8 marks)

(ii) Explain the components of a MIDI interface. (7 marks)

5. (a) Explain steps involved in a JPEG compression process. (15 marks)

Or

(b) Discuss the characteristics of a multimedia database management system. (15 marks)

[4 × 15 = 60 marks]