2015

M.Sc.

1st Semester Examination

COMPUTER SCIENCE

PAPER—COS-104

Full Marks : 50

Time : 2 Hours

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Module—I

(Computer Graphics)

Answer any *two* questions : 10×2

1. (a) What do you mean by composite transformation ? 2

(b) Calculate the transformation matrix for reflection of an object about any line y = mx + c. 8

2. (a) Derive Bezier curve of four (4) control points and finally express it in matrix notation.

8

(b) What is convexity of the blending function of Bezier curve ?

2

3. (a) Briefly discuss, the relation between B-spline curve and Bezier curve.

5

(b) Define window and view port. Why mid-point subdivision algorithm is preferred over Cohen-Sutherland algorithm in clipping ?

2+3

4. (a) What is projection ? Write down the different types of projection in details.

(b) Define Auxilary view.

(b) What is oblique projection ?

4+3+3

Module—II

(Multimedia)

Answer any *two* questions : 10×2

5. (a) Discuss digitization principle of audio. 5

(b) What is MIDI ? Explain the advantages and disadvantages of MIDI over the digital audio. 2+3

6. Describe the principle of Half-toning approximation. 10

7. (a) What is multimedia ? Discuss multimedia distributed processing model. 2+3

(b) What do you mean by image acarrinition and representation ?

(c) Discuss MPEG video compression technique ? 2+3

8. (a) What do you mean by audio lantancy and video data rate ?

(b) State any two communication devices.

[(2+2)+1]

(c) What do you mean by authoring and publishing of hypermedia.

(d) What is hypermedia data model ?

[(2+2)+1]

[Internal Assessment — 10 Marks]

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