



Name :

Roll No. :

Invigilator's Signature :

**CS/B.Tech (ICE)/SEM-6/IC-602/2010
2010
MULTIMEDIA**

Time Allotted : 3 Hours

Full Marks : 70

The figures in the margin indicate full marks.

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

GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for the following : $10 \times 1 = 10$
 - i) MPEG stands for
 - a) Motion Picture Express Group
 - b) Motion Picture Expert Group
 - c) Motion Picture Export Group
 - d) Motion Picture Extract Group.
 - ii) The minimum refresh rate to avoid flicker for all motion devices is
 - a) 30 Hz
 - b) 40 Hz
 - c) 50 Hz
 - d) 70 Hz.
 - iii) GIF stands for
 - a) Graphics Image Format
 - b) Grey Information File
 - c) Geographical Information File
 - d) None of these.



GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. $3 \times 5 = 15$

2. Differentiate between Unicode Transformation formats UTF-32, UTF-16 and UTF-8.
3. Compare Raster and Vector graphics.
4. What is morphing ? How is it related to animation ?
5. What do you mean by Sub Band Coding ?
6. Write a short note on CLUT.

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

7. Write short description about device independent colour models and define
 - i) CIE L * a * b * Model
 - ii) HSB Model.

What is gamma and gamma correction for monitors ? Describe the working principle of a LASER printer. The colours of an image may appear different on two different monitors, explain whether true or false. $6 + 2 + 4 + 3$

8. What is the difference between tone and note ? Write a short note on Musical Instrument Digital Interface (MIDI). What is quantization error ? An audio signal is recorded in computer in stereo mode using a bit depth of B such that its data rate is R KB/sec. Find an expression for the average frequency of the signal. $2 + 6 + 3 + 4$

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9. What do you mean by CODEC ?

Explain

- i) Huffman coding scheme
- ii) Arithmetic coding scheme.

What is the advantage of LZW coding scheme over LZ coding scheme ? What do you mean by Run Length Encoding ?

2 + 3 + 4 + 3 + 3

10. What is the difference between Intraframe and Interframe compression ? What do you mean by I-frame, B-frame and P-frame in context of video compression ? Explain JPEG compression standard.

3 + 6 + 6

11. Write short notes on any *three* of the following :

3 × 5

- i) ISDN
- ii) Image processing software
- iii) HTML
- iv) Scanner
- v) Norman's seven stages of action.

