	Utech
Name :	
Roll No.:	To Owner by Exercising and Explained
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.

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- iv) Which database system is generally used in multimedia?
 - a) RDBMS
- b) DBMS
- c) Data Dictionary
- d) None of these.
- v) Multimedia Software are
 - a) C++ and Java
- b) My SQL
- c) Flash and Photoshop
- d) None of these.
- vi) Arithmetic Encoding is
 - a) Lossless compression b)
 - Lossy compression
 - c) LZW coding
- d) None of these.
- vii) Bit depth of ASCII code is
 - a) 6 bit

b) 7 bit

c) 8 bit

- d) 9 bit.
- viii) Video file format is
 - a) TIFF

b) AVI

c) WAV

- d) both (a) & (b).
- ix) Resolution of a VGA monitor is
 - a) 640×480
- b) 800×600
- c) 1024×786
- d) 320×440 .
- x) Output devices are
 - a) Hard Disk
- b) Plotter
- c) Pen Drive
- d) None of these.

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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.

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