Name : ....

Roll No. : ....

Invigilator's Signature : ....

CS/B.Tech(ICE)/SEM-6/IC-602/2012
2012
MULTIMEDIA SYSTEM

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 × 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.

iv) Which database system is/are 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.
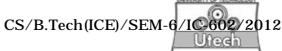
viii) Video file format is

a) TIFF b) AVI

c) WAV d) both (a) and (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.

GROUP – B
(Short Answer Type Questions)
Answer any *three* of the following.   3 × 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 it is related to animation ?

5. What do you mean by Sub Band Coding ?

6. Write a short note on CLUT.

GROUP – C
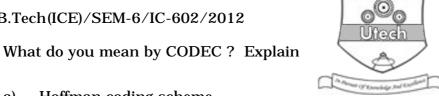### (Long Answer Type Questions)
Answer any *three* of the following.   3 × 15 = 45

7. Write short description about device independent colour models and define

   What is gamma and gamma correction for monitors ? Describe the working principal 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 recoded on a computer 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

6326   3   [Turn over

9. What do you mean by CODEC ? Explain

    a) Hoffman coding scheme

    b) Arithmetic coding scheme.

    What is the advantage of LZW coding scheme over LZ coding scheme ? What do you mean by Running 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. What is multimedia database ? Describe basic structure of multimedia database. Describe in brief how image database is constructed ? Write the applications of virtual reality ?

    2 + 5 + 5 + 3

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