Printed Pages-3

TIT012

(Following Paper ID and Roll No. to be filled in your Answer Book) PAPER ID: 0513 Roll No.

B. Tech.

(SEM. VII) ODD SEMESTER THEORY EXAMINATION 2010-11

MULTIMEDIA SYSTEM

Time: 3 Hours

Total Marks: 100

Note: (1) Attempt all questions.

- (2) All questions carry equal marks.
- (3) Be precise in your answers.
 - (4) No Second Answer book will be provided.
- 1. Attempt any four parts of the following: $(5\times4=20)$

- What are the different objects of the multimedia? (a)
- Differentiate between video and animation. (b)
- (c) List the characteristics of a good image authoring tools.
- (d) What aspects of the target audience would you take into consideration before designing a multimedia project?
- (e) How CMYK color model differs from the RGB color model?
- (f) Explain the following:
 - Horizontal retrace and vertical retrace (i)
- (ii) Beam penetrations and shadow mask technique,

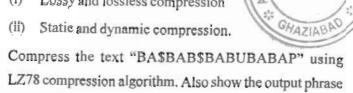
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Turn Over

- Attempt any four parts of the following:
 - Differentiate between FM Synthesizers and Wavetable synthesizers.
 - How digital audio differs from MIDI?
 - What are settings required to record audio in windows environment?
 - For a movie with Frame rate of 25fps, resolution of 1000 × 800 and color depth of 16 bits calculate the following:
 - The number of frames required for a movie of duration 5 Sec.
 - No. of vertical retraces if the CRT display has a refresh rate of 50 Hz.
 - (e) What are the different DVD formats used today for carrying multimedia contents?
 - What do you mean by streaming audio and what are its advantages?
- Attempt any two parts of the following: $(10 \times 2 = 20)$
 - (a) Construct the Huffman tree and generate the code for the following data:

Symbol	Frequency
A	30
В	30
C	15
D	15
-E	10

- Differentiate between the following:
 - Lossy and lossless compression
 - Static and dynamic compression.



EOF

- and the dictionary obtained after this compression, Attempt any two parts of the following: $(10 \times 2 = 20)$
 - What is Pulse Code Modulation (PCM)? And how it differs from Differential Pulse Code Modulation (DPCM) and Adaptive Differential Pulse Code Modulation (ADPCM)?
 - (b) What are sampling variables? And how to reduce the quantization error?
 - (c) What are the characteristics of an audio that you will consider before choosing it for a web based application?
- Attempt any four parts of following: $(5 \times 4 = 20)$
 - What is the role of Discrete Cosine Transformation in image compression? Explain.
 - Differentiate between spatial and temporal redundancy,
 - What is zig zag scan and why it is used?
 - What is key frame animation? List any two animation tools that use key frame animation,
 - Explain at least two television broadcasting standards.
 - What is digital water marking technique and how it can be used in multimedia?