



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

PAPER ID : 0513**Roll No.**

GH	42								
----	----	--	--	--	--	--	--	--	--

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 : **(5×4=20)**

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

2. Attempt any four parts of the following : (5×4=20)

- 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.
- What are the different DVD formats used today for carrying multimedia contents ?
- What do you mean by streaming audio and what are its advantages ?

3. Attempt any two parts of the following : (10×2=20)

- Construct the Huffman tree and generate the code for the following data :

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



(b) Differentiate between the following :

- Lossy and lossless compression
- Static and dynamic compression.

- Compress the text "BA\$BAB\$BABUBABAP" using LZ78 compression algorithm. Also show the output phrase and the dictionary obtained after this compression.

4. Attempt any two parts of the following : (10×2=20)

- What is Pulse Code Modulation (PCM) ? And how it differs from Differential Pulse Code Modulation (DPCM) and Adaptive Differential Pulse Code Modulation (ADPCM) ?
- What are sampling variables ? And how to reduce the quantization error ?
- What are the characteristics of an audio that you will consider before choosing it for a web based application ?

5. Attempt any four parts of following : (5×4=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 ?