Reg. No.										

MANIPAL INSTITUTE OF TECHNOLOGY, MANIPAL 576104

(Constituent College of Manipal University)

SEVENTH SEMESTER B.Tech (IT) DEGREE MAKE UP EXAMINATION, JANUARY – 2016
SUBJECT: ELECTIVE IV: MULTIMEDIA COMMUNICATION – ICT 435
(REVISED CREDIT SYSTEM)

TIME: 3 HOURS **05/01/2016** **MAX. MARKS: 50**

Instructions to candidates

- **Answer any FIVE FULL questions.**
- **Missing data, if any, may be suitably assumed.**

1A. Compress the following data using Huffman encoding and find its compression rate.

XXXXXXYYZZXXXXAABBXXXCCCCCCCCCXXXXXXXXXX

1B. With a suitable example, explain rate monotonic scheduling algorithm.

1C. Explain different kind of image formats.

[5 + 3 + 2]

2A. With a neat diagram explain RTP header format.

2B. Explain Lossless JPEG encoding technique.

2C.Why do we need MDBMS?

[5 + 3 + 2]

3A. With a neat diagram, explain Raster Display system.

3B. Explain error resilient techniques used in wireless video transmission.

3C. Using Delta Modulation method compress the following PCM samples: [Take k = 5]

225, 250, 200, 225, 350, 400, 250, 100

[5 + 3 + 2]

4A. Using 2D-DCT, find DC and highest frequency AC coefficient for the following data:

0	128
64	50

4B. Explain H.261 inter-frame and intra-frame coding.

4C. Explain different QoS parameters used to decide quality of transmission.

[5 + 3 + 2]

5A. Explain Data stream characteristics of continuous media.

5B. With a neat diagram explain speech recognition system.

5C Calculate means square error and PSNR between the data unit X and Y, where

X = [10, 12, 50, 100, 4, 15, 100, 25, 55, 24]

Y= [9, 10, 45, 105, 4, 15, 99, 22, 50, 14]

[5 + 3 + 2]

6A. Apply lossless predictive encoding for the data given below.

25, 15, 20, 30, 50, 25, 15, 10

6B. Explain I, P and B frame encoding techniques used in MPEG-1.

6C. Write a short note on RTCP packets.

[5 + 3 + 2]