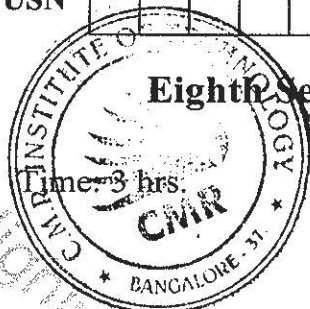


USN

10EC/TE841



Eighth Semester B.E. Degree Examination, June / July 2014

Multimedia Communication

Max. Marks: 100

Note: Answer FIVE full questions, selecting at least TWO questions from each part.

PART - A

- 1 a. List the five basic of communication network that are used to provide multimedia services. Explain with a neat diagram, i) Broadcast television network ii) Integrated service digital network. (12 Marks)
- b. Explain with neat diagram of multipoint conferencing modes and types of conferencing. (08 Marks)
- 2 a. With the aid of a diagram, explain how a color image is captured within a camera scanner using each of the following methods:
 - i) Single image sensor.
 - ii) A single image sensor with filters.
 - iii) Three separate image sensors. Include in your explanations the term "photosites and 'CCD's and the role of the readout register. (10 Marks)
- b. Derive the bit rate and the memory requirements to store each frame that results from the digitization of both a 525 line and 625 line system, assuming a 4 : 2 : 0 format. Also find the total memory required to store a 2 hour movie / video. (10 Marks)

- 3 a. Initially a dictionary containing only three characters with code as follows:

Code	String
1	X
2	Y
3	Z

Now if the input string is **XXYYXXYZXXYYX**. Use LZW compression algorithm, find the output code. Also show that it is truly lossless algorithm by using LZW decoder.

- b. Explain the following with neat diagram,
 - i) Image / block preparation. (10 Marks)
 - ii) Forward DCT. (10 Marks)
- 4 a. With the help of a neat diagram, explain LPC encoder and decoder. (10 Marks)
- b. Explain H.261 encoding formats. (10 Marks)

PART - B

- 5 a. What is transparent bridge? With a neat diagram, explain transparent bridge architecture and its application example. (10 Marks)
- b. Explain in detail token ring network frame formats and field description. (10 Marks)
- 6 a. Explain with a neat diagram, IP adjunct protocol. (10 Marks)
- b. Explain IPV6 datagram format. (10 Marks)
- 7 a. Explain ATM adaption layer 1 & 2 with neat format. (10 Marks)
- b. Explain with a schematic diagram of ATM LAN. (10 Marks)
- 8 a. Explain TCP / IP protocol suite with a neat diagram. (10 Marks)
- b. Write a short note on:
 - i) Real time transport protocol (RTP).
 - ii) Real time transport control protocol (RTCP). (10 Marks)