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## Paper ID [EC512]

(Please fill this Paper ID in OMR Sheet)

MAY 2008

M.Tech. (Sem. - 2<sup>nd</sup>)

### MULTIMEDIA COMMUNICATION SYSTEMS (ECE - 512/513)

Time : 03 Hours

Maximum Marks : 100

#### Instruction to Candidates:

- 1) Attempt any Five questions.
- 2) All questions carry equal marks.

- Q1)** Name the different multimedia communication techniques and explain any two communication techniques in detail.
- Q2)** (a) What do you mean by encoding? Give the difference between source encoding and channel encoding.  
(b) How does circuit switching differ from packet switching? What difficulties are encountered in sending packetized speech?
- Q3)** (a) What is meant by ATM? What does the qualifier "Asynchronous" in ATM refer to? Is ATM a real-time architecture? Highlight some features of ATM.  
(b) What do you mean by amount of information? Explain the different types of multimedia information.
- Q4)** (a) Why does a quantized signal need to be encoded for transmission?  
(b) Provide stage-by-stage description of a differential pulse code modulation (DPCM) system with block diagrams of the transmitter and receiver section.
- Q5)** (a) What is lossless compression? Explain any two lossless compression standards.  
(b) Explain any two image compression techniques in detail.

**Q6)** What is the need of audio/video standards? Explain different MPEG standards and also give their frame structure.

**Q7)** (a) What do you mean by surfing the World Wide Web (WWW)? What is Hypertext document? Name its main elements.

(b) What does TCP/IP stand for? Explain. Give a correspondence between the layers of the OSI reference model and those of internet model.

**Q8)** Write short notes on any two :

(a) Entertainment networks

(b) Text compression techniques

(c) JPEG standard

