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10EC/TE841

**Eighth Semester B.E. Degree Examination, June/July 2019**

**Multimedia Communication**

Time: 3 hrs.

Max. Marks: 100

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

**PART – A**

- 1 a. With the help of a diagram, explain the following:  
i) Data network (10 Marks)  
ii) Integrated services digital network (06 Marks)  
b. Explain the operational modes of multipoint conferencing. (04 Marks)  
c. Explain the principle operation of packet switching network. (04 Marks)
- 2 a. Explain the principle of operation of PCM speech codec with a block diagram. Also explain compressor and expander. (10 Marks)  
b. With a neat diagram, explain audio/sound synthesizer. (06 Marks)  
c. Find out the time taken to transmit the following digitized images at both 64 kbps and 1.5 Mbps:  
i) A  $640 \times 480 \times 8$  VGA compatible image  
ii) A  $1024 \times 768 \times 24$  SVGA compatible image (04 Marks)
- 3 a. Encode the string 'went.' comprising characters with probabilities of e = 0.3, n = 0.3, t = 0.2, w = 0.1, . = 0.1 using arithmetic coding. (10 Marks)  
b. With a neat block diagram, explain JPEG. (10 Marks)
- 4 a. Explain with a neat diagram, ADPCM sub-band encoder and decoder. (10 Marks)  
b. Explain H.261 video encoder with block diagram and explain the role of FIFO buffer. (10 Marks)

**PART – B**

- 5 a. With the aid of a diagram, explain transparent bridge and give an example. (10 Marks)  
b. Explain the following with neat diagrams:  
i) FDDI networking components (10 Marks)  
ii) Physical interface (10 Marks)
- 6 a. Explain IPV6 datagram format in detail. (10 Marks)  
b. Explain fragmentation and reassembly in the internet with an example. (10 Marks)
- 7 a. With the help of a diagram, explain broadband ATM cell formats. (10 Marks)  
b. Explain classical IP over ATM (IPOA) LAN. (10 Marks)
- 8 a. Explain TCP/IP protocol suite. (10 Marks)  
b. Explain RTP and RTCP. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.