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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
    ii) Integrated services digital network   **(10 Marks)**
    b. Explain the operational modes of multipoint conferencing.   **(06 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
    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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