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10EC/TE841

Eighth Semester B.E. Degree Examination, June/July 2017
Multimedia Communication

Time: 3 hrs.

Max. Marks:100

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

PART – A

- 1 a. With the help of a diagram, describe the main components of PSTN. Show how a high speed modem provides multiple services in addition to basic telephony. (10 Marks)
- b. List the five basic types of communication networks that are used to provide multimedia services. Explain with neat diagram (i) Broadcast television network (ii) Integrated services digital network. (10 Marks)
- 2 a. Explain the principle of operation of a PCM speech codec with a block diagram. (06 Marks)
- b. Find out the time taken to transmit the following digitized images at both 64 kbps and 1.5 Mbps:
 - (i) a 640×480×8 VGA compatible image
 - (ii) a 1024×768×24 SVGA compatible image (04 Marks)
- c. With a neat diagram explain audio/sound synthesizer. (06 Marks)
- d. Write a note on 4 : 2 : 2 format? (04 Marks)
- 3 a. With a neat block diagram explain the working of JPEG encoder. (10 Marks)
- b. 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)
- 4 a. With the help of a neat diagram explain LPC encoder and decoder. (08 Marks)
- b. Explain H.261 encoding format. (08 Marks)
- c. Give the meaning of motion estimation and compensation with respect to video compression. (04 Marks)

PART – B

- 5 a. Explain the principle of operation of token ring network with the help of a diagram. (10 Marks)
- b. Explain in detail the LAN protocols and protocol framework with diagram. (10 Marks)
- 6 a. With example explain fragmentation and reassembly in the internet. (10 Marks)
- b. Describe the operation of ARP and RARP. (10 Marks)
- 7 a. With the help of diagram explain broadband ATM cell formats. (10 Marks)
- b. Explain LAN emulation in ATM. (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.