BTS –III(S)– 05.17 – 0746 Reg. No. | | | | | | | | | |

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B.Tech. Degree III Semester Supplementary Examination May 2017

CS 15-1306 DATA AND COMPUTER COMMUNICATION

(2015 Scheme)

Time: 3 Hours Maximum Marks:60

PART A

(Answer *ALL* questions)

(10 × 2 = 20)

I. (a) What are the different levels of addresses used in an internet employing the TCP/IP protocols?

(b) The power used at home has a frequency of 60 Hz (50 Hz in Europe). Determine the period of the sine wave.

(c) A periodic signal has a bandwidth of 20 Hz. The highest frequency is 60 Hz. What is the lowest frequency? Draw the spectrum if the signal contains all frequencies of the same amplitude.

(d) Which of the three multiplexing techniques is common for fiber optic links? Explain with reason.

(e) What is the significance of the twisting in twisted-pair cable?

(f) What are the two approaches to packet-switching?

(g) What is Hamming distance? What is the minimum Hamming distance?

(h) Explain Huffman coding.

(i) Briefly explain IEEE 802.11.

(j) Explain Piconet and Scatternet.

PART B

(4 × 10 = 40)

II. Explain analog-to-analog conversion. (10)

OR

III. (a) An analog signal carries 4 bits per signal element. If 1000 signal elements are sent per second, find the bit rate. (2)

(b) Explain Data Rate Limits. (8)

IV. Explain the wired medias used for transmission. (10)

OR

V. (a) Explain the various modem standards. (5)

(b) Describe the SS7 service and its relation to the telephone network. (5)

VI. Explain CRC with an example. (10)

OR

VII. (a) What kind of error is undetectable by the checksum? (2)

(b) Explain Go-back-N ARQ with flow diagram. (8)

VIII. Explain the different network topologies. (10)

OR

IX. Explain the various categories of connecting devices. (10)

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