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By K B Hemanth Raj

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CBCS SCHEME

15CS46

USN ⬜⬜⬜⬜⬜⬜⬜⬜⬜⬜

Fourth Semester B.E. Degree Examination, June/July 2018
Data Communication

Time: 3 hrs.   Max. Marks: 80

Note: *Answer any FIVE full questions, choosing one full question from each module.*

Module-1

1   a. Define Data Communication. Explain any two fundamental characteristics of Data communication and basic network topology. **(08 Marks)**
    b. List out the causes of transmission impairment. Explain the characteristics of analog and digital signals. **(08 Marks)**

OR

2   a. List out the network criteria. Explain TCP/IP protocol suite with neat diagram. **(08 Marks)**
    b. Define Line coding and list out its characteristics. Represent the following sequence 1011001011 using polar and bipolar scheme. **(08 Marks)**

Module-2

3   a. List out the types of transmission modes. Explain the steps of pulse code modulation process, with an example. **(08 Marks)**
    b. Explain FSK and QAM modulation process, with suitable example. **(08 Marks)**

OR

4   a. Define Multiplexing. Explain synchronous TDM with data rate management and its limitations. **(10 Marks)**
    b. List out three phases of circuit – switched network. Explain Data gram – switched network. **(06 Marks)**

Module-3

5   a. Define Cyclic code. Find the codeword using CRC for given data word 1001 and divisor 1011. **(08 Marks)**
    b. Define Frames. Explain the steps of flow control at data link layer with diagram. **(08 Marks)**

OR

6   a. Explain Stop – and – Wait protocol with neat diagram. **(08 Marks)**
    b. Explain the frame structure of PPP protocol, with neat diagram. **(08 Marks)**

Module-4

7   a. List out the Random Access Protocols and explain CSMA/CA. **(10 Marks)**
    b. List out channelization protocols. Explain CDMA. **(06 Marks)**

OR

8   a. Explain Wireless – LAN, with neat architecture and list out its characteristics. **(08 Marks)**
    b. Explain the layers of Bluetooth, with neat diagram. **(08 Marks)**

Module-5

9   a. List the difference between IPV_4 and IPV_6. Explain any two methods of converting from IPV_4 to IPV_6. **(08 Marks)**
    b. Explain the IP Datagram, Header format, with neat diagram. **(08 Marks)**

OR

10 a. Define Home address in mobile IP. Explain three phases for communication in mobile IP. **(08 Marks)**
    b. Define WiMax. Explain fourth generation (4G) of cellular telephone. **(08 Marks)**

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