

End Semester Examinations - 2015-16 Even Semester - May 2016

14EI2013 Industrial Data Communication and Networks

Set B

Time : 3 hrs
Total Marks: 100

1. (a) Draw the Manchester and Differential Manchester line code for the data 1011111110.(5)
(b) What is the need of UART in serial interface? (2)
(c) Describe how UART functions as a transmitter and receiver. (13)

OR
2. (a) Discuss the functions of individual OSI layers for communication between open systems. (15)
(b). Differentiate TCP/IP model from OSI model (5)
3. (a) What is the need of 4 to 20 mA current loop? What is the significance of live zero and dead zero? (5)
(b) Discuss in detail about the LRC, VRC, CRC method and checksum method of error detection with examples (15)

OR
4. (a) Elaborate on the multi-drop serial communication link that has line drivers operating in tri-state. (12)
(b) Compare the serial interface standards available in industry. (8)
5. (a) What is the advantage of HDLC over SDLC? (5)
(b) Describe the HDLC protocol in detail (15)

OR
6. (a) What are the two sublayers of Datalink layer? Mention the functions of these sublayers.(5)
(b) Discuss about the channelization methods of channel access with examples (15)
7. (a) Discuss in detail about IEEE802 standard Ethernet protocol. (15)
(b). Draw the response frame for reading a single register of address 000B with content 11FF .(5)

OR
8. (a) How is data transferred in a Packet switched network (5)
(b) Elaborate on the architecture of Profibus protocol. (15)
9. (a) Elaborate on the protocol used widely for communication in automotive industry (15)
(b) Explain the format of AS-i frame (5)

Wishing you All the Best