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Code No. : 14606 O2

VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD
B.E. (IT) II Year II-Semester Old Examinations, May-2018

Data Communication

Time: 3 hours

Max. Marks: 70

Note: Answer ALL questions in Part-A and any FIVE from Part-B

Part-A (10 × 2 = 20 Marks)

1. What are the rules to be followed in designing layered architecture?
2. What are the advantages of optical fiber communications?
3. Distinguish synchronous and asynchronous transmission.
4. Compare Go back N protocol with sliding window protocol.
5. State the need for Digital subscriber line. Also classify various xDSL technologies.
6. Illustrate ATM cell header.
7. List various implementations of traditional Ethernet.
8. What are the various topologies used in LANs?
9. List any four application areas for WLANs.
10. State the features of CDMA.

Part-B (5 × 10 = 50 Marks)

11. a) Discuss TCP/IP protocol architecture in brief. [6]
b) Analog signal has a bit rate of 10000 bps and a baud rate of 3000 baud. How many data elements are carried by each signal element? [4]
12. a) Describe the procedure to generate CRC code at the transmitter? Explain with an example. [5]
b) List various error control techniques in data link layer. Explain Go- back- N ARQ in brief. [5]
13. a) Distinguish between FDM and TDM. [4]
b) Draw the architecture of ATM and explain the functions of each layer in ATM. [6]
14. a) Discuss about Fast Ethernet. Also list various implementation of Fast Ethernet. [5]
b) Explain about Layer 2 and Layer 3 switches. [5]
15. a) Draw Bluetooth architecture and briefly explain its operation. [5]
b) Illustrate the architecture of IEEE 802.11 in detail. [5]
16. a) Explain the different encoding schemes of 'Digital data and Analog signals'. [7]
b) Discuss various flow control techniques used in data link layer. [3]
17. Answer any *two* of the following:
 - a) List various switching methods used in data communications? Brief about circuit switching. [5]
 - b) With neat diagram explain CSMA/CD in detail. [5]
 - c) Describe the operation of Basic Cellular System. [5]

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