

Code No: 37031

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
R05 IV B.Tech. I Semester Supplementary Exams, May/June – 2009
COMPUTER NETWORKS
(Common to ECE, EIE, BME, MCT, ETM)

Time: 3 hours

Max. Marks.80

Answer any Five questions
All questions carry equal marks

1. a) What is the purpose of data modems? Describe the features of various types of data modems.
b) Describe the OSI reference model. Explain the purpose of each layer. [8+8]
2. a) Write a brief note on Frame relay and X.25 networks.
b) Write the features of various types of transmission media. [8+8]
3. a) Describe the significance of error detection and error correction mechanisms in data link layer.
b) Discuss about BISYNC data link control protocol. [8+8]
4. Write a brief note on the following:
a) IEEE 802.4 token bus standard
b) ALOHA protocol. [16]
5. a) Describe the multicast routing algorithm. Explain its merits and limitations.
b) Describe the significance of datagram approach in subnets. [8+8]
6. a) Describe about TCP protocol.
b) Write a brief note on the transport layer. Explain the Connection establishment and connection release in transport layer. [8+8]
7. a) Describe the public key cryptography algorithm.
b) Compare and contrast the differences between encryption and data compression techniques. [8+8]
8. a) Describe the significant features of application layer.
b) Describe about FTAM services. [8+8]

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1. a) What are the network services? Describe the TCP/IP reference model.
b) Describe the OSI reference model and its merits. [8+8]
2. a) Describe the various types of transmission media and their merits.
b) Write a note ATM networks. [8+8]
3. a) Describe the design issues for data link layer.
b) Describe about HDLC data link control protocols. [8+8]
4. a) Describe the features of ALOHA protocol. Explain its merits.
b) Describe IEEE 802.3 CSMA/CD standard and IEEE 802.5 token ring standard. [8+8]
5. a) Compare and contrast the differences between shortest path routing and hierarchical routing.
b) Compare and contrast the differences between broadcast routing and multicast routing. [8+8]
6. a) Describe the congestion control algorithms.
b) Describe the features of distance vector routing algorithm. [8+8]
7. a) What is meant by encryption ? Describe the public key Cryptography.
b) Write the significance of data compression and syntax conversion. [8+8]
8. a) Describe the significance of DNS.
b) Describe the salient features of multimedia. Also explain the applications of multimedia. [8+8]

SET-3

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1. a) Explain TCP/IP reference model.
b) Write about RS-232 interface. [8+8]
2. a) Explain about fiber optic transmission media.
b) Discuss about Broadband ISDN and ATM networks. [8+8]
3. a) Explain about IEEE 802.5 standard.
b) Write short notes on wireless LANS. [8+8]
4. a) Compare virtual circuit and data gram approaches.
b) Explain distance vector routing with one example. [4+12]
5. What is congestion? Explain different congestion control algorithms. [16]
6. a) Explain TCP and UDP protocols.
b) Write short notes on data compression and Transport services. [8+8]
7. a) Explain about Domain Name systems(DNS).
b) Explain about Multimedia. [8+8]
8. Write short notes on:
(a) Word Wide Web.
(b) FTAM
(c) VTP. [16]

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1. a) Draw the OSI reference model and explain each layer in it.
b) Write a note on ATM networks. [8+8]
2. a) Write about data link layer design issues.
b) Discuss about HDLC data link control protocols. [8+8]
3. a) Write about IEEE 802.3 standard.
b) Write a note on inter networking devices. [8+8]
4. a) Compare virtual circuits and datagram subnet.
b) Explain the shortest paths routing with one example. [8+8]
5. Write short notes on
(a) Network layer in Internet.
(b) Multicast-routing.
(c) Broadcast –routing. [16]
6. a) Explain connection establishment and connection release in transport layer.
b) Explain the following
(i) UDP (ii) Encryption [8+8]
7. a) Explain about FTAM services.
b) Discuss about DNS. [8+8]
8. a) Explain about multimedia.
b) Discuss about WWW. [8+8]
