

(Please write your Exam Roll No.)

Exam Roll No.

END-TERM EXAMINATION

FOURTH SEMESTER [B.TECH.]– MAY-JUNE 2007

Paper Code:ETME212

Subject: LAN & Networking

Time : 3 Hours

Maximum Marks : 75

Note: Attempt one question from each unit. Question No.1 is compulsory.

- Q.1 Answer the following: - (2.5x10)
- (a) Explain how the 10 Mbps Ethernet can also be made to function as 100 Mbps Ethernet or fast Ethernet?
 - (b) Explain why IEEE 802.11 Wireless LAN will not benefit from the Collision Detection Capability of CSMA/CD?
 - (c) What is a virtual LAN and why it is called so?
 - (d) Why is IPV6 considered better than IPV4? Has this standard being completely deployed in Internet? Give reasons.
 - (e) Discuss the "PLUG and PLAY" features of the bridge.
 - (f) Explain "Cut through switching".
 - (g) What is broadband Internet connection?
 - (h) Explain in short the TCP/IP model.
 - (i) What is encryption? Give two algorithms of encrypting the plain text.
 - (j) Explain what is guided & unguided media? Give examples.

UNIT-I

- Q.2 (a) Explain in detail various type of error detecting and error correcting codes. (6.5)
(b) Explain how CRC of a message can be calculated? Give examples. (6)
- Q.3 Explain how both Flow Control and Error Control in done in stop and wait protocol and sliding window protocol. (12.5)

UNIT-II

- Q.4 Explain the following routing algorithms with help of diagrams and examples.
(a) Distance Vector Routing (6)
(b) Link-State Routing (6.5)
- Q.5 (a) Explain what is a subnet mask and how sub-netting can be done? (6)
(b) Explain various classes of class full routing. Explain class-less routing. (6.5)

UNIT-III

- Q.6 (a) Explain how the OSI architecture is mapping to the TCP/IP architecture by giving the functionality of each layer of both architecture. (9)
(b) Give reasons as to why the seven layered OSI architecture is compressed into 5-layered TCP/IP architecture of Internet. (3.5)

- Q.7 (a) Sketch the Manchester and differential Manchester encoding for the bit stream 0001110101. (6)
- (b) Consider building a CSMA/CD network running at 1Gbps over 1-km cable with no repeaters. The signal speed in the cable is 200,000 km/sec. What is the minimum frame size? (6.5)

UNIT-IV

- Q.8 Explain the following applications in detail give its uses and its data formats and their port numbers. (6.5+6)
- (a) HTTP
- (b) DNS
- Q.9 (a) Explain what types of attacks can be made on the network of an organization? (6.5)
- (b) Give a detailed account of security mechanism and services to avert the attack. (6)

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