

END - TERM EXAMINATION

FOURTH SEMESTER [MCA] – MAY-JUNE 2006

Paper Code: MCA-208
Paper ID: 44208

Subject: Computer Networks

Time: 3 Hours

Maximum Marks: 60

Note: Q. 1 is compulsory. Attempt one questions from each unit.

- Q1. (a) Name the factors that affect the performance of a network. (2 x 10=20)
(b) Name the factors that affect the security of a network.
(c) What are the key elements of a protocol?
(d) Which OSI layers are the user support layers?
(e) What are the responsibilities of the data link layer?
(f) Explain the difference between encoding and modulation.
(g) How is CRC superior to LRC?
(h) Why is flow control needed?
(i) Describe the three HDLC station type.
(j) What is the function of a router?

UNIT-I

- Q2. (a) What is computer networking? Discuss the various types of it. (5)
(b) Give the names of various layers in OSI model. State the role of network layer in it. (5)
- Q3. (a) What do you mean by wireless transmission? Briefly describe the various media that support wireless transmission. (5)
(b) Distinguish between FSK, PSK and ASK? Discuss Pulse code modulation. (5)

UNIT -II

- Q4. (a) What is framing? How are errors controlled in data link layer? Discuss it. (5)
(b) State the function of data link layer. (5)
- Q5. What are LAN, WAN and MAN? Discuss various issues related to LAN's. (10)

UNIT-III

- Q6. (a) What are internet working? What are the various ways in which in which network can differ? (5)
(b) In what way is link state routing better than Distance Vector Routing. Explain in detail. (5)

- Q7. (a) What are the reasons of congestion in networks? Describe the general principle of congestion control? (5)
- (b) State the techniques of achieving good quality of services in networks. (5)

UNIT-IV

- Q8. (a) Explain flow control, buffering and multiplexing in context of transport layer. (5)
- (b) What are the functions of a transport layer? What type of information must be contained in the transport header of the transport layer? Explain it. (5)
- Q9. What do you mean by Encryption and Authentication? Discuss briefly the two techniques of maintaining network security. (10)

(Please write your Roll No. immediately)

Roll No.

END - TERM EXAMINATION

FOURTH SEMESTER [MCA] – MAY 2004

Paper Code : MCA-210

Subject : Computer Networks

Time : 3 Hours

Maximum Marks : 60

Note : Attempt any five questions. All questions carry equal marks.

- Q1. (a) When and why computer networking is essential? Discuss the various key-issues of computer networking.
- (b) What is meant by Computer Network Architecture? Discuss client-server Architecture and its benefits.
- Q2. (a) What are the theoretical basis of data communications? Discuss client-server Architecture and its benefits.
- (b) What is broad band? Discuss the broad band network.
- Q3. What are computer network protocols? Indicate their purposes. Give some examples of data link protocols.
- Q4. Discuss in detail two versions of ALOHA to solve the channel allocation problem.
- Q5. What do you know about congestion control? Discuss the various algorithms for it.
- Q6. What do you know about routing? Discuss the algorithm which you consider best in detail. Give your arguments for best algorithm.
- Q7. What is an Internet? Discuss the network layer in it.
- Q8. Write notes on the following:-
- (a) TCP/IP model
 - (b) Wireless transmission
 - (c) Internetworking
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(Please write your Roll No. immediately)

Roll No.

END - TERM EXAMINATION

FOURTH SEMESTER [MCA] – MAY 2003

Paper Code : MCA-210

Subject : Computer Networks

Time : 3 Hours

Maximum Marks : 60

Note : Attempt any five questions. All questions carry equal marks.

- Q1. (a) What are the aims and objectives of computer networking? Discuss the various types of computer networking.
- (b) What is OSI model of network architecture? Explain the advantages and disadvantages of OSI model.
- Q2. (a) Discuss the difference between twisted pair and co-axial cables.
- (b) What do you mean by ISDN? Discuss its services and architecture.
- Q3. What is the function of data link layer? Discuss the various design issues of it.
- Q4. (a) Discuss the channel allocation problems.
- (b) Discuss IEEE standard 802 for LANs.
- Q5. Discuss in detail the various network layer design issues.
- Q6. What is Routing? Discuss various routing algorithms.
- Q7. What do you mean by MAN? Discuss IEEE standard 802 for MANs.
- Q8. Write short notes on the following:-
- (a) Subnetting
- (b) Fiber cable
- (c) Satellite network
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END - TERM EXAMINATION

FOURTH SEMESTER [MCA] – JUNE 2001

Paper Code : MCA-210 Subject : Data Communication & Computer Network

Time : 3 Hours

Maximum Marks : 70

Note : Attempt any five questions.

- Q1. (a) What are design issues of layered architecture? (6)
- (b) Compare and contrast TCP/IP and OSI reference model. (8)
- Q2. (a) What is modulation? Explain amplitude and frequency modulation in detail. What are their advantages and disadvantages? (8)
- (b) What is the difference between a passive star and an active repeater in a fiber optic network? (4)
- (c) A noiseless 4-KHz channel is sampled every 1 msec. What is the maximum data rate? (2)
- Q3. (a) What is switching? Explain circuit switching and packet switching. What is the difference between packet and circuit switching? Discuss the pros. and cons of these techniques. (10)
- (b) Does time division switching necessarily introduce a minimum delay at each switching stage? If so, what is it? (4)
- Q4. (a) What are error detecting and correcting codes? What is the utility of Hamming distance in error detection and correction? Explain with a suitable example. (9)
- (b) What is CRC? Explain. (5)
- Q5. (a) What is IEEE standard 802.5? Explain its frame format. (8)
- (b) Describe static and dynamic channel allocation in LAN's and MAN's. (6)
- Q6. (a) What are general principles of congestion control? (6)
- (b) Explain Leaky Bucket Algorithm. (8)

Q7. (a) What is Encryption? What is a public and private key? What are the main strategies to provide the security to a network system? (8)

(b) Explain various types of Ciphers. (6)

Q8. Write short note on:- (14)

(a) ATM

(b) FTP

(c) SNMP

(d) IP format
