

(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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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

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