

NEW SCHEME

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Fourth Semester M.C.A Degree Examination, January/February 2005

Master of Computer Applications

Computer Networks

Time: 3 hrs.]

[Max.Marks : 100

Note: Answer any FIVE full questions.

1. (a) Describe the terms
 - i) Distributed system.(ii)Computer network
 - iii) Middle ware.(iv) World wide web.(v) Server. (10 Marks)
- b) Describe the terms
 - i) LAN (ii) WAN (iii) Connection oriented service.
 - iv) Connection-less service.(v) Virtual Circuit. (10 Marks)
2. (a) Describe the services rendered by the network layer to the transport layer. (10 Marks)
- b) Describe the terms adaptive and non-adaptive routing algorithms, with an example for each. (10 Marks)
3. (a) What is hierarchial routing ? What are its advantages and disadvantages? Design optimum two level and three level hierarchial routing systems for a network consisting of 9600 nodes. (10 Marks)
- b) What is Congestion in networks? State the reasons.Describe a congestion control method. (10 Marks)
4. (a) Describe the three standard techniques for achiveing good quality of service. (10 Marks)
- b) What is Internet working ? Discuss the technical problems involved. What is fragmentation? Explain. (10 Marks)
5. (a) Describe the terms TDPU,Nesting of TDPUS,packets and frames and transport servive primitives. (10 Marks)
- b) What is 'Packet life time'?Describe the three methods used to restrict packet lifetime. (10 Marks)
6. (a) Describe the concepts of :
 - i) Flow control and buffering.
 - ii) Crash recovery. (10 Marks)
- b) Describe the terms:
 - i) DNS scheme.
 - ii) Resource records. (10 Marks)
7. (a) For the e-mail system,describe
 - i) User agents
 - ii) Message transfer agents. (10 Marks)

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b) Describe the following terms:

i) Web pages (ii) Hyperlinks.

Describe the steps involved in the usage of hyperlinks.

(10 Marks)

8. (a) Describe the terms secrecy, authentication, nonrepudiation and integrity control.

(10 Marks)

b) Describe the DES method. What are its shortcomings? How the triple DES method overcomes the shortcomings?

(10 Marks)

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Third Semester MCA Degree Examination, Dec.09/Jan.10
Computer Networks

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

- 1
 - a. Draw the OSI network architecture. Explain each layer in detail. (10 Marks)
 - b. Define process model with diagram. (05 Marks)
 - c. Explain the internet protocol graph. (05 Marks)

- 2
 - a. What do you mean by Last-Mile links? (04 Marks)
 - b. Explain two dimensional parity. (06 Marks)
 - c. What is framing? What are the different types of framing approach? (10 Marks)

- 3
 - a. Explain to concept of stop and wait protocol with diagram. (10 Marks)
 - b. Discuss token ring network and its frame format. (10 Marks)

- 4
 - a. Explain virtual circuit switching. (10 Marks)
 - b. What are the main limitations of bridges? (05 Marks)
 - c. Explain segmentation and reassembly in ATM. (05 Marks)

- 5
 - a. What do you mean by subnetting? (05 Marks)
 - b. Explain CIDR. (05 Marks)
 - c. Discuss in detail IPV6. (10 Marks)

- 6
 - a. Explain open shortest path first algorithm. (10 Marks)
 - b. Explain DHCP and its frame format. (10 Marks)

- 7
 - a. Explain the concept of three hand shake. (05 Marks)
 - b. Draw the state transition diagram of TCP and explain in detail. (10 Marks)
 - c. Explain UDP header format. (05 Marks)

- 8

Write short notes on the following :

 - a. HTTP (05 Marks)
 - b. FTP (05 Marks)
 - c. DNS (05 Marks)
 - d. VOIP. (05 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
 2. Any revealing of identification, appeal to evaluator and/or equations written eg. 42+8 = 50, will be treated as malpractice.

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Third Semester MCA Degree Examination, May/June 2010
Computer Networks

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions.

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| 1 | a. Define computer networks. Explain the internet architectures. | (10 Marks) |
| | b. With a neat block diagram, explain OSI architecture. | (10 Marks) |
| 2 | a. Define framing. Explain point-to-point protocol and SONET. | (10 Marks) |
| | b. Define piconet. With a neat block diagram, explain piconet networks. | (10 Marks) |
| 3 | a. Differentiate between connection oriented and connection less services. | (08 Marks) |
| | b. Define switching. Explain various types of switching. | (12 Marks) |
| 4 | a. Define an internet. With a block diagram, explain IPV4 packet format. | (08 Marks) |
| | b. Define routing. Explain distance vector routing. | (12 Marks) |
| 5 | a. Differentiate between TCP and UDP. | (06 Marks) |
| | b. With a neat block diagram, explain the state transition for connection establishment and termination. | (08 Marks) |
| | c. Explain how TCP manages byte streams. | (06 Marks) |
| 6 | a. Discuss the various problems in resource allocation. | (09 Marks) |
| | b. Explain fragmentation and reassembly. | (11 Marks) |
| 7 | a. Define DNS. Explain the hierarchy of name servers. | (10 Marks) |
| | b. Explain the manage gateway. | (10 Marks) |
| 8 | Write short notes for the following: | |
| | a. Wi-Max (802 · 11) | |
| | b. Routing for mobile holts | |
| | c. Bridges and LAN switches | |
| | d. Address resolution protocol (ARP). | (20 Marks) |

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