Printed Pages : 4

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MCA-414

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 214421

Roll No. | | | | | | | | | | |

M.C.A.

(SEM-IV) THEORY EXAMINATION 2014-15

COMPUTER NETWORKS

Time : 3 Hours] *[Total Marks : 100*

Note: Attempt all questions. All questions carru equal marks.

1. Attempt any four parts of the following: 4×5=20

   a) Discuss the advantages of Computer Networks.

   b) Compare point to point networks with multipoint networks.

   c) Compare and contrast MAC address with IP address.

   d) Differentiate between adaptive and non- adaptive routing algorithms.

   e) What is meant by packet switching?

2. Attempt any four parts of the following: 4×5=20

a) What is tranmission media? Explain various transmission media by specifying its data rate, bandwidth and naming conventions.

b) What is LAN? Explain various design parameters of an Ethernet LAN.

c) Explain distance vector routing algorithm with a suitable example and contrast it with link state routing protocol.

d) Explain UDP and conpare it with TCP.

e) Discuss the working of Virtual Private Network.

3. Attempt any two parts of the following: 10×2=20

a) What is meant by the topology of a network? Explain various topologies for the network with clear sketch of its broadcast domain and collision domain.

b) Discuss briefly layers of ISO-OSI reference model of the network.

c) Define the switching and explain the various methods of its with suitable examples.

4. Attempt any two parts of the following: 10×2=20

a) What are the error and flow control techniques in a network? Explain various ARQ techniques with suitable example. Discuss error and flow techniques implemented in Ethernet LAN.

b) What is hamming code? Calculate the hamming code for following message string: 1100101 with each and every step explained clearly.

c) What is multiple access communication? Explain various multiple access techniques.

5. Attempt any two parts if the following : 10×2=20

a) What is an interconnecting device in the internet? Explain various interconnecting device used in the internet with suitable example.

b) Define IP Addressing. Compare and contrast IPv4 with IPv6.

c) What is meant by QoS?Explain various techniques to achieve this in the internet.

—x—