Code: 9F00302

MCA III Semester Supplementary Examinations September/October 2014
COMPUTER NETWORKS
(For students admitted in 2009, 2010, 2011 and 2012 only)

Time: 3 hours   Max Marks: 60

Answer any FIVE questions
All questions carry equal marks
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1 (a) Differentiate between OSI reference model and TCP/IP model.
   (b) Explain the characteristics of twisted pair cable.

2 (a) Explain the term sliding window. Illustrate and explain the operation of selective repeat.
   (b) List and explain the services provided by data link layer.

3 (a) Explain the functions of repeaters and bridges. What are their limitations?
   (b) Discuss in brief MAC frame structure for IEEE 802.3.

4 (a) Explain the count-to-infinity problem and solution in distance vector routing.
   (b) Give the general principles of various congestion control algorithms.

5 (a) Explain about fragmentation.
   (b) Discuss in detail about the routing in the internetworking.

6 (a) Explain the flow control mechanism in transport layer.
   (b) Define UDP and discuss the different fields of the format of a used datagram. List out the
        uses of UDP protocol.

7 (a) Explain the message authentication operation used in RSA technique.
   (b) What is meant by firewall? Explain the types of firewall.

8 (a) What is electronic mail? Explain the two scenarios of architecture of e-mail.
   (b) What is a name server? List and explain the features of various name servers.

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