Code No: MC306

R06

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
MCA III Semester Examinations, January/February 2012
COMPUTER COMMUNICATIONS

Time: 3hours   Max.Marks:60

Answer any five questions
All questions carry equal marks
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1. a) How do you classify the Networks based on Transmission media and Scale? Explain them.
   b) Why do you think the presentation and session layers are not there in TCP/IP reference model?
   c) Why the Physical layer and Data link layer in TCP/IP reference model together known as Host-to-Network layer?

2. a) What do you mean by critical angle? Explain the single mode and multimode fibers?
   b) How the light dispersion can be avoided in the light pulses transmitting through the fiber optics?
   c) What is Piggybacking?
   d) What do you mean by a transmitter or receiver window? How does it help in flow control?

3. a) Explain the Static and Dynamic channel allocation problem.
   b) Explain 1-persistent CSMA/CD.
   c) What is a Piconet? Explain.

4. a) Explain the closed loop and open loop congestion control algorithms.
   b) What is Virtual Circuit Subnet?
   c) Explain the organization of Routing Table in case of Virtual Circuit subnet.

5. a) What the various flags in the TCP header? Explain the purpose of each flag.
   b) What are Upward and Downward Multiplexing? Explain them.

6. a) Explain the Request and Response messages for HTTP.
   b) Explain the SMTP message formats.

7. a) What is Cryptography? Explain Substitution and Transposition Ciphers.
   b) Illustrate and describe "Cipher Block Chaining Mode and Cipher Feedback Mode".

8. a) What is a PGP protocol? Explain how it can provide e-mail security.
   b) Explain the Secure Sockets Layer (SSL).

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