Code :R5321301

R5

III B.Tech II Semester(R05) Supplementary Examinations, April/May 2011
COMPUTER NETWORKS
(Electronics & Control Engineering, Computer Science & Systems Engineering, Electronics &
Computer Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE questions
All questions carry equal marks
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1. (a) Differentiate between computer network and distributed system.

   (b) What are the important goals achieved through networking?

   (c) Explain about the four main applications of the Internet.

2. (a) Compare and contrast RZ and bipolar AMI.

   (b) Differentiate between optical fiber and coaxial cables.

3. (a) How will you determine the performance of stop & wait protocol?

   (b) What is piggybacking? What are its advantages?

   (c) A upper layer message is split into 10 frames, each of which has a 80 percent chance of arriving undamaged. If no error control is done by the data link protocol, how many times must the message be sent on the average to get the entire thing through?

4. (a) Discuss about MAC addresses.

   (b) Explain about a bit-map collision free protocol.

5. (a) What is Multicasting. How it is different from broadcasting. How do you construct a multicast tree. Explain with an example.

   (b) What are the applications of multicasting.

6. (a) How congestion is controlled in ATM?

   (b) Explain ATM LAN emulation.

7. (a) Sequence number and ACK number field are present in TCP segment. Is it bytes or segments that are numbered? Is it the individual bytes or segments that are acknowledged? Explain in detail how TCP uses sequence numbers and ACK numbers.

   (b) How flow control is achieved using window size field of TCP segment?

   (c) Why TCP uses port number field in its header?

8. (a) What is public key cryptography? What are the necessary conditions for public key cryptography?

   (b) Explain RSA algorithm with example.

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