Code No: R05310504   **R05**   **Set No. 2**

III B.Tech I Semester Examinations,November 2010
COMPUTER NETWORKS
Common to Information Technology, Computer Science And Engineering

Time: 3 hours   Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks
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1. (a) What do you mean by guided media? Explain about the different guided media used for communication?

   (b) Illustrate how asynchronous transfer mode can be contrasted with the synchronous T1 carrier? [10+6]

2. (a) What are the fields in message header of e_{mail} system?

   (b) What are SMTP types & subtypes? Explain them. [6+10]

3. (a) Discuss about the architecture of DQDB Metropolitan Area Network?

   (b) What is the advantage of an open system environment? Discuss the different functions performed by various layers of OSI model. [8+8]

4. Define route. Why routing algorithm is required. Routes can be predetermined and then use them when required (or) Routes can be determined when needed and use them immediately. First method is proactive and second method is reactive. Which one is preferred for wired networks? Justify your answer. [16]

5. (a) What is the difference between Slow Start and Congestion Avoidance of TCP?

   (b) What is the format of ATM Cell?

   (c) Why ATM uses fixed size cells? [8+4+4]

6. (a) Discuss about the file key assumptions in case of dynamic channel allocation in LANs and WANs?

   (b) Discuss in detail the working of token bus? [8+8]

7. (a) Consider an error-free 64 kbps satellite channel used to send 512 byte data frames in one direction, with very short acknowledgements coming back the other way. What is the maximum throughput for window sizes 1,7,15 and 127?

   (b) What is pipelining? What are its advantages? What are the issues that raises when pipelining frames over an unreliable communication channel? Mention the approaches to deal with these errors? [8+8]

8. (a) Identity the address class of the following IP addresses
      200.58.20.165,   128.167.23.20,   16.196.128.50,   150.156.10.10
      250.10.24.96

   (b) Convert the above addresses to binary representation.

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(c) A Class B network on the Internet has a subnet mask of 255.255.240.0. What is the maximum number of hosts per subnet.   [5+6+5]

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3

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(c) Why ATM uses fixed size cells? [8+4+4]

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Code No: R05310504   **R05**   **Set No. 3**

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(b) What is the format of ATM Cell?

(c) Why ATM uses fixed size cells? [8+4+4]

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