

Code No: 07A6EC08

**R07****Set No. 2**

III B.Tech II Semester Examinations, APRIL 2011

**COMPUTER NETWORKS**

Common to Information Technology, Electronics And Computer  
Engineering, Computer Science And Engineering, Computer Science And  
Systems Engineering

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions  
All Questions carry equal marks

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1. Explain about
  - (a) Network graph.
  - (b) Spanning tree.
  - (c) Optimality principle. [5+5+6]
2. Explain token bucket algorithm and compare its performance against the leaky bucket algorithm. [16]
3. (a) List out the services provided by transport layer in OSI model?  
(b) Explain the LAN technologies? [8+8]
4. Explain the architecture of WWW as on client/server application? [16]
5. (a) Draw and explain the fields of HDLC frame format.  
(b) Explain the fundamental operation of stop and wait protocol. [8+8]
6. (a) Explain the features of wireless transmission?  
(b) Discuss in detail about space division switches? [8+8]
7. Discuss various timers used by TCP to perform its various operations. [16]
8. Explain the CSMA/CD protocol with binary exponential back off algorithm used in internet. [16]

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1. Explain the Serial Line Internet Protocol(SLIP)? [16]
2. Explain the leaky bucket and Token bucket algorithms? [16]
3. Explain in detail about Multiplexing and crash recovery. [16]
4. Explain in detail about the authentication protocols? [16]
5. (a) Differentiate between Guided and Unguided transmission media. Give one example of each. Also describe any one guided transmission media in detail.  
(b) Discuss in detail about Time division switches? [8+8]
6. (a) Compare point -to-point channels with broadcast channels along with suitable examples?  
(b) Explain the subnet in Network Architecture?
7. Explain the following:
  - (a) Reverse path forwarding.
  - (b) Distance vector Routing. [8+8]
8. (a) Explain 802.11 MAC sublayer protocol?  
(b) Discuss in detail the working of token bus? [8+8]

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**R07****Set No. 1**

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1. Explain the various transmission media? List out their advantages and disadvantages. [16]
2. Explain Briefly:
  - (a) End-to-End Delivery.
  - (b) Addressing.
  - (c) Reliable Delivery. [5+5+6]
3. Write short notes on:
  - (a) Collision free protocols
  - (b) Wireless LANs. [8+8]
4. Give the format of IP header and explain the significance of each field in detail. [16]
5. Discuss with examples sliding window protocol using selective repeat and sliding window protocol using go-back-n. [16]
6. (a) What is the function of a router? .  
 (b) What are the main elements of distance vector routing?  
 (c) What algorithm does link state routing use to calculate the routing table? [16]
7. What are the two categories of cryptography methods? What is the main difference between two categories? Explain each one of them with examples. [16]
8. (a) Explain the relationship of services to protocols?  
 (b) Explain WWW?  
 (c) Explain the features of ARPANET? [4+4+8]

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Max Marks: 80

Answer any FIVE Questions  
All Questions carry equal marks

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1. Discuss about data link layer in HDLC? [16]
2. (a) What is the basic purpose of MAC layer protocol?  
(b) Explain the function of following MAC layer protocols.
  - i. Ethernet
  - ii. Token bus. [8+8]
3. Write short notes on :
  - (a) HTML.
  - (b) SNMP.
  - (c) E-mail.
  - (d) WWW. [4+4+4+4]
4. (a) Compare and contrast distance vector routing with link state routing.  
(b) Discuss in detail about Bellman Ford algorithm. [8+8]
5. (a) Explain the functions of transport layer.  
(b) Compare UDP with TCP.  
(c) Explain the strategies of TCP used to avoid congestion. [6+6+4]
6. (a) Explain problems of the TCP/IP model and protocols?  
(b) With a neat diagram explain ARPANET? [8+8]
7. Explain the attributes of flow characteristics and explain any two types of the traffic shaping techniques to improve QOS? [16]
8. (a) Explain the subscriber's conceptual view of ISDN?  
(b) Write about Asynchronous communication in detail. [8+8]

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