

Code No. N0421**R07****Set No.1****IV B.Tech I Semester Supplementary Examinations, February/March, 2012****COMPUTER NETWORKS****(Common to Electronics & Communications Engineering, Electronics & Instrumentation Engineering and Bio-Medical Engineering)****Time: 3 hours****Max. Marks: 80****Answer any FIVE Questions
All Questions carry equal marks**

1. a) What is the importance protocol in networks
b) Compare OSI and TCP/IP protocol models
2. a) What is the necessity of digital/analog to analog/digital conversion schemes.
b) Encode the bit stream 1001001110010 in to following (assume polarity of first 1 is positive)
 - i) NRZ
 - ii) DIFFERENTIAL MANCHESTER
 - iii) AMI
 - iv) B8ZS
3. a) Explain in detail about elementary DLL protocols.
b) What is piggybacking? Give the merits of piggybacking?
4. a) Explain different ALOHA protocols in detail
b) What are the functions of bridges in networks?
5. a) Explain Dijkstra's shortest path routing algorithm with example.
b) Differentiate between multicasting and broadcasting.
6. What is congestion explain different policies that effect congestion at different layers
7. a) What are the similarities and differences between Data Link layer and Transport layer?
b) How is ATM Adaption layer (AAL) is different from TCP? Explain
8. a) What is meant by Encryption? Describe the public key cryptography.
b) State and explain working of the built-in HTTP request methods.

Code No. N0421**R07****Set No.2****IV B.Tech I Semester Supplementary Examinations, February/March, 2012****COMPUTER NETWORKS****(Common to Electronics & Communications Engineering, Electronics & Instrumentation Engineering and Bio-Medical Engineering)****Time: 3 hours****Max. Marks: 80****Answer any FIVE Questions
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1. a) Describe the OSI reference model. Explain the purpose of each layer.
b) Explain various network topologies in detail.
2. Explain different type's transmission media of physical layer.
3. a) Explain the different types of error detection codes and give the what they can and cannot detect.
b) Construct the HAMMING code for the bits 10011001
4. a) Draw and explain 802.3 frame format.
b) Explain the operation of spanning tree bridges.
5. Explain hierarchical routing with example.
6. a) What is congestion? Describe different congestion control algorithms.
b) Briefly discuss about IP address classes and special IP addresses.
7. a) Explain different steps in connection management
b) List the differences between TCP and UDP.
8. Write short notes on the following
 - a) MIME
 - b) WAP
 - c) DNS
 - d) VIDEOCOMPRESSIONSTANDARDS

Code No. N0421**R07****Set No.3****IV B.Tech I Semester Supplementary Examinations, February/March, 2012****COMPUTER NETWORKS****(Common to Electronics & Communications Engineering, Electronics & Instrumentation Engineering and Bio-Medical Engineering)****Time: 3 hours****Max. Marks: 80****Answer any FIVE Questions
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1. a) List two ways in which The OSI reference model and The TCP/IP reference model are the same.
b) List two advantages and two disadvantages of having international standards for network protocols.
c) Explain the Novell NetWare reference model.
2. a) Compare different transmission media
b) Give the services provided by broad band ISDN
3. a) Find the checksum for the data 1010110110110001 send using a check of 4 bits.
b) Explain the parameters to be considered in flow control
4. a) Discuss the problems with minimum/ maximum length frames used in MAC layer.
b) What are the services needed in wireless LAN MAC sublayers
5. a) Explain the distance vector routing and hierarchical routing in detail.
b) Convert the IP address whose hexadecimal representation is C22F1582 to dotted decimal notation.
6. a) Describe congestion control in Datagram subnets.
b) Explain the exterior gateway routing protocol – BGP.
7. a) Explain the Real-time transport protocol.
b) Explain the flow control and buffering in transport layer protocols.
8. Write short notes on any three of the following
a) Domain name space b) MIME c) SNMP d) electronic mail

Code No. N0421**R07****Set No.4****IV B.Tech I Semester Supplementary Examinations, February/March, 2012****COMPUTER NETWORKS****(Common to Electronics & Communications Engineering, Electronics & Instrumentation Engineering and Bio-Medical Engineering)****Time: 3 hours****Max. Marks: 80****Answer any FIVE Questions
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1. a) What are the reasons for using layer protocol?
b) Discuss the design issues for the layers in communication protocols
2. a) If a binary signal is sent over a 3-kHz channel whose signal-to-noise ratio is 20dB, what is the maximum achievable data rate?
b) Explain the ATM reference model.
3. a) Explain the design issues of data link layer.
b) Briefly, Explain Go Back N and Selective Repeat sliding window routing protocols.
4. a) Sketch the Manchester encoding and the Differential Manchester encoding for the bit stream : 0001110101 Assume the line is initially in the low state.
b) Explain Bit-Map and Binary countdown collision-free protocols.
5. a) List the differences between datagram and virtual circuit subnets.
b) Explain count to infinity problem with suitable example.
6. Explain different congestion prevention policies at different layers
7. a) Give the functions of transport layer.
b) Explain ATM AAL2 layer protocol.
8. Write short notes on the following.
 - a) DNS
 - b) MIME
 - c) Audio compression