

Advanced Computers Networks (End Term - Dec 2008)

Note : Q1 is compulsory. Attempt one question from each unit.

Q1. Answer all questions

(6*2=12)

- a) Mention any two uni-cast and multi-cast routing protocols.
- b) Explain the difference between port number and ephemeral port number. Give their applications.
- c) Explain 3-way handshaking and 4-way handshaking used in TCP connection establishment.
- d) Give the drawbacks of Frame Relay technology.
- e) Explain how tunneling plays an important role in inter-networking.
- f) Explain why private keys and public keys are used in cryptography.

Unit – I

Q2.

- a) Compare ARP and RARP. Give their respective operations. (4)
- b) Explain the following routing protocols and give their performance :- (5)
 - I) RIP
 - II) OSPF
- c) Explain various parameters set during router configuration. (3)

Q3.

- a) Explain the following ICMP messages (5)
 - I) Error Reporting
 - II) Query
- b) Compare Ipv4 and Ipv6 protocols. (3)
- c) Explain the following inter networking features and give their applications. (4)
 - I) Concatenated Virtual Circuit
 - II) Connectionless Interworking

Unit - II

Q4.

- a) Compare narrowband ISDN and broadband ISDN. (4)
- b) Explain any two DLL protocols. (4)
- c) Compare the following : (4)
 - I) Router II) Bridge III) Switch IV) Gateway

Q5.

- a) Explain various transmission impairments. (3)
- b) Explain various LAN technologies. Give their standards. (5)
- c) Compare and contrast ATM and Frame relay technologies. (4)

Unit - III

Q6.

- a) Explain UDP format. Give its operations. (6)
- b) UDP belongs to which layer of TCP/IP reference model. Give its applications. (3)
- c) Compare TCP and UDP protocols. (3)

Q7.

- a) Explain TCP format. Describe various fields. (4)
- b) Explain various types of timers. (4)
- c) Explain Single byte and multi byte options used in TCP. (4)

Unit – IV

Q8.

- a) Explain any two application layer protocols. (6)
 - I) SNMP II) RMON III) WWW
- b) Compare private networks and virtual private networks. (3)
- c) Explain the mechanism of Cryptography. (3)

Q9.

a) Explain briefly the operation of SMTP. Explain how users mail is sent from one country to another? Give sequence of operations. (6)

b) Compare the following Firewalls (6)

I) Packet Filter Firewall II) Proxy Firewall III) Application Firewall