



ENGINEERING & MANAGEMENT EXAMINATIONS, APRIL - 2009

INTERNET TECHNOLOGY

SEMESTER - 8

Time : 3 Hours]

[Full Marks : 70

GROUP - A

(Multiple Choice Type Questions)

1. Choose the correct alternative of the following : 10 × 1 = 10

- i) The port address uniquely identifies
- | | | |
|------------|------------------|--------------------------|
| a) Process | b) Host | |
| c) Server | d) All of these. | <input type="checkbox"/> |
- ii) Default mask for 193.6.7.2 is
- | | | |
|------------------|-------------------|--------------------------|
| a) 255.0.0.0 | b) 255.255.0.0 | |
| c) 255.255.255.0 | d) none of these. | <input type="checkbox"/> |
- iii) Which mapping method is used to find a physical address given a logical address ?
- | | | |
|---------|----------|--------------------------|
| a) HTIP | b) ARP | |
| c) DNS | d) RARP. | <input type="checkbox"/> |
- iv) Which of following is shortcoming of RIP protocol ?
- | | | |
|-------------------|------------------|--------------------------|
| a) Failure | b) Convergence | |
| c) Authentication | d) All of these. | <input type="checkbox"/> |
- v) Which protocol is used to deliver vital network information to either diskless computers or computers at 1st boot ?
- | | | |
|----------|---------|--------------------------|
| a) HTTP | b) SMTP | |
| c) BOOTP | d) UDP. | <input type="checkbox"/> |

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- vi) Which protocol is designed to provide security at the transport layer ?
 - a) IPSEC
 - b) SSL
 - c) Firewall
 - d) All of these.
- vii) Which port is used for control connection of FTP ?
 - a) 20
 - b) 21
 - c) 80
 - d) 6890.
- viii) The TELNET client converts the characters to which of the following form ?
 - a) ASCII
 - b) NUT
 - c) UNICODE
 - d) None of these.
- ix) SSL is located between and
 - a) transport, network
 - b) application, transport
 - c) data link, physical
 - d) network, data link.
- x) Firewall is a specialised form of a
 - a) bridge
 - b) disk
 - c) printer
 - d) router.

GROUP - B

(Short Answer Type Questions)

Answer any three of the following. 3 x 5 = 15

- 2. a) Illustrate with diagram the Firewall implementation. 3 + 2
- b) What is bit implementation of SSL ? 3 + 2
- 3. a) What is "routing with partial information" ? 2 + 3
- b) What is Domain Name System ? 2 + 3
- 4. What is Subnet ?
- An organization is granted the block 130.56.0.0/16. The administrator wants to create 1024 subnets. Design the subnets (that include subnet mask, number of students, no. of hosts in each subnet, first and last address in each subnet). 5
- 5. Explain what you mean by anonymous FTP. 5
- Explain the reasons for the delayed delivery of an e-mail by SMTP. 5
- 6. Define the drawback of RARP. 5
- State how you can overcome from this by bootstrap protocol (BOOTP). 5

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GROUP - C

(Long Answer Type Questions)

Answer any three questions.

3 × 15 = 45

- 7. a) Give the differences between directed broadcast & limited broadcast. 3
- b) What is Multicast addressing ? 3
- c) "TCP/IP provides a connectionless and reliable transport service". Explain. 4
- d) Give the format of an Internet datagram. 5
- 8. a) Discuss about routing in an internet. 5
- b) Explain with example the Bellman-Ford Routing. 5
- c) Discuss the autonomous system concept. 5
- 9. a) What is the purpose of RIP ? What are the functions of a RIP message ? Why the expiration timer value is six times than that of the periodic timer value ? List RIP shortcomings and their corresponding fixes ?

b) A router has the following RIP routing table.

Net1	4	B
Net2	2	C
Net3	1	F
Net4	5	G

What would be the contents of the table if the router receives the following RIP from router C.

Net1	2
Net2	1
Net3	3
Net4	7

c) Why do OSPF messages propagate faster than RIP messages ? 7 + 4 + 4

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10. a) Is the size of ARP packet fixed ? Explain. 5
- b) What is multicast addressing ? Describe the working principle of transport Gateway. 1 + 3
- c) What is the size of a question record contain an IP address ? 2
- d) When does the DHCP server need to check the static database for address mapping ? What are the types of information can a client receive from a DHCP server when it is booted for the first time in a network ? 2 + 2
11. Write short notes of any *three* of the following : 3 x 5
- a) FTP
- b) OSPF
- c) Frame Relay
- d) VPN
- e) TELNET.

END

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