NB-145

December-2015

4th Year M.Sc. (CA & IT)

Advance Networking

Time : 3 Hours]   **[Max. : 100**

1. (A) Answer in detail. (Any **two**)   **10**

     (1) List and explain in detail different aspects of protection of resources.

     (2) Discuss the two schemes of IP Security with diagram.

     (3) List and explain the characteristics of HTTP protocol.

   (B) Answer in brief. (Any **two**)   **4**

     (1) Define: Security Association and Security Parameter Index.

     (2) Write a brief note on HTTP Error Messages.

     (3) List out all methods of HTTP.

   (C) Answer the objectives.   **6**

     (1) HTTP status code for successful execution display of web-page on client-side is _____.

     (2) Provide the format of URL.

     (3) What is the default port-number for HTTPS ?

     (4) What is replay avoidance ?

     (5) What is the value of NEXT HEADER field in IP header, if authentication header is implemented in datagram ?

     (6) Define : Firewall.

2. (A) Answer in detail. (Any **two**)   **10**

     (1) Explain with diagram DHCP address acquisition states.

     (2) Explain different properties of Reliable Stream delivery.

     (3) Explain TCP Segment format with diagram and all its fields.

   (B) Answer in brief. (Any **two**)   **4**

     (1) What is silly window syndrome ?

     (2) Explain the techniques for initializing NAT Table.

     (3) Discuss DHCP retransmission policy.

(C) Answer the objectives. **6**

    (1) What are the protocols available at Transport layer with their full-forms ?

    (2) How does TCP identify a unique connection on Internet ?

    (3) List out the different types of NAT techniques.

    (4) List out the two real-life implementations of NAT.

    (5) List out the protocols with full-forms used earlier to DHCP for configuring IP addresses.

    (6) List out different DHCP Message types.

3. (A) Answer in detail. (Any **two**) **10**

    (1) Explain textual Remote Terminal Protocol with its diagram.

    (2) Explain Client and Server system process mode of file-transfer.

    (3) Explain protocol which is used to transfer Mail from Permanent mailbox to local computer.

(B) Answer in brief. (Any **two**) **4**

    (1) What are the advantages of Flat Namespaces ?

    (2) Explain the mechanism of SSH.

    (3) List and explain the features of FTP.

(C) Answer the objectives. **6**

    (1) Who maps URL to IP address ?

    (2) Which protocol allows remote computers an exact copy of the desktop and to run applicants ?

    (3) What is the default port-number for FTP ?

    (4) Explain sub-type parallel multi-port messages.

    (5) List out two top-level domain names along with their meanings.

    (6) NVT stands for _____.

4. (A) Answer in detail. (Any **two**) **10**

    (1) Discuss Table-driven IP forwarding and Next-Hop Forwarding methods for datagram delivery.

    (2) Explain UDP Message Format with a discussion on CHECKSUM.

    (3) Explain route change request from router with ICMP redirect message format.

(B) Answer in brief. (Any **two**)   **4**

    (1) Explain Proxy ARP technique.

    (2) Explain Error Reporting in ICMP.

    (3) Explain any two fields of UDP pseudo-header.

(C) Answer the objectives.   **6**

    (1) What is Ping command used for ?

    (2) What is the value of TYPE field for ICMP Message type 'Echo Request' ?

    (3) What is the default port-number for UDP ?

    (4) What IP address is used for Broadcast ?

    (5) Is the IP protocol connectionless or connection-oriented ?

    (6) Define : Subnetting.

5. (A) Answer in detail. (Any **two**)   **10**

    (1) Explain all the classes for Classful IP Addressing.

    (2) Write a short-note on Network Byte order.

    (3) Explain all the fields of IPv4 Header with diagram.

(B) Answer in brief. (Any **two**)   **4**

    (1) Explain Type Of Service in brief.

    (2) Explain IP Multi-cast addresses.

    (3) Write the advantage and disadvantage of using per-assigned UDP port numbers ?

(C) Answer the objectives.   **6**

    (1) What IP address does all-0s mean ?

    (2) List out Internet Addressing Authorities with their full-forms.

    (3) What IP address is reserved for loopback ?

    (4) What is jitter and what technique is used for avoiding it ?

    (5) What is the function of RARP ?

    (6) What is the use of TTL field in IP header ?

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