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Question Paper Code : 45300

5 Year M.Sc. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2014.

Elective

Software Engineering

ESE 510 — NETWORK PROTOCOLS

(Regulation 2010)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. State the roles of ICMP.
2. What does a router do if it is unable to deliver a packet to its destination?
3. What do you mean by foreign agent in mobile IP?
4. How does BOOTP guard against loss of message?
5. What is the purpose of the root server in DNS?
6. What are the features of NFS?
7. List any four SMTP commands.
8. What is the difference between HTTP POST and HTTP PUT command?
9. What is active and passive monitoring in firewall?
10. List and define the basic IPV6 address types.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Describe the main services offered by ICMP. (6)
(ii) With schematic explain the behavior of the TCP as a finite state machine. (10)

Or

- (b) (i) Discuss IP routing and distance vector routing procedures. (8)
(ii) Explain the features of BGP in detail (8)

12. (a) (i) Explain about the broadcast and multicast routing. (8)
(ii) Describe about two-cross problem in mobile IP multicasting. (8)

Or

- (b) (i) Explain the BOOTP message format and its operations. (8)
(ii) Explain with a neat sketch the DHCP operations. (8)
13. (a) (i) Explain in detail the organization of domain Name Space. (8)
(ii) Describe the features and process model of FTP. (8)

Or

- (b) (i) Explain the working of TELNET protocol with neat diagram. (8)
(ii) Describe the use of NFS remote procedure call between client and server. (8)
14. (a) Explain the architecture, delivery of mail, interaction with end user and the various options supported in an e-mail system.

Or

- (b) Explain in detail the multimedia services over IP using RTP.
15. (a) (i) Explain the SNMP architecture with its implementation in the network management system. (8)
(ii) Explain the packet filter and application level gateway configuration of firewalls. (8)

Or

- (b) (i) Explain the basic header of IPV6 with a neat diagram. (8)
(ii) Describe the extension header of IPV6 with a neat diagram. (8)