Reg. No. :

Question Paper Code: 49201

M.E. DEGREE EXAMINATION, DECEMBER 2014.

First Semester

Computer Science and Engineering

(Common to Computer Science and Engineering [with specialization in networks])

14PNE518 – TCP/IP DESIGN AND IMPLEMENTATION

(Regulation 2014)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions.

PART A - (5 x 1 = 5 Marks)

1. What protocol is used to find the hardware address of a local device?

    (a) RARP   (b) ARP   (c) IP   (d) ICMP

 2. RIP is an intra-domain routing and it is based on which of the following routing method:

    (a) Link State   (b) distance vector   (c) path vector   (d) none of these

3. Urgent data requires urgent pointer field as well as the URG bit in which field

    (a) Control   (b) Offset   (c) sequence number   (d) none of these

4. Traffic Capacity is given by

    (a) Switching capacity $\times$ Theoretical maximum load

    (b) Switching capacity / Theoretical maximum load

    (c) Theoretical maximum load / Switching capacity

    (d) None of the above

5. Which is connectionless, unreliable datagram protocol that is primarily responsible for addressing and routing packets between hosts?

    (a) IPV4   (b) IPV6   (c) IPV4 and IPV6   (d) None of these

6. Differentiate ARP and RARP.

7. What is the importance of ICMP?

8. What is persistant timer?

9. What is Multiprotocol label switching?

10. Mention the enhanced features of IPV6.

PART - C (5 x 16 = 80 Marks)

11. (a) Give a brief explanation about TCP/IP network architecture. Compare it with OSI model. (16)

Or

 (b) Explain in detail about subnetting and supernetting with suitable examples. (16)

12. (a) Describe Link state routing protocol. Compare and contrast with distance vector routing. (16)

Or

 (b) State the working principles of ICMP and IGMP. (16)

13. (a) Give a detailed description about the TCP connection establishment and termination.

(16)

Or

 (b) Explain about flow control and adaptive retransmission policy used in TCP. (16)

14. (a) Discuss in detail about the signaling protocols of the IP. (16)

Or

 (b) What are the limitations of IP Traffic engineering and also discuss about the future of Traffic engineering? (16)

15. (a) Compare IPv6 with IPv4. Explain the strategies used for the transition from IPv4 to IPv6. (16)

Or

 (b) Write a detailed description about ICMPv6. Explain about various messages redefined in ICMPv6 to handle the issue of neighbor discovery. (16)

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