Reg. No. : | | | | | | | | | | |

Question Paper Code: 42942

M.E. DEGREE EXAMINATION, NOVEMBER 2015

Elective

Computer Science and Engineering (with specialization in networks)

14PNE512 – NETWORK PROTOCOLS

(Regulation 2014)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 1 = 5 Marks)

1. Which of the following TCP/IP protocol is used for transferring electronic mail messages from one machine to another?
   (a) FTP (b) SNMP (c) SMTP (d) RPC

2. A station in a network forwards incoming packets by placing them in its shortest output queue. What routing algorithm is being used?
   (a) Hot potato routing (b) Flooding
   (c) Static routing (d) Delta routing

3. Which of the following is associated with SNMP?
   (a) SMI (b) BER (c) DNS (d) MIB

4. Which one of the following algorithm is not used in asymmetric-key cryptography?
   (a) RSA algorithm (b) Diffie-Hellman algorithm
   (c) Electronic code book algorithm (d) None of the above

5. How many hosts are attached to each of the local area networks at your site?
   (a) 128 (b) 254 (c) 256 (d) 64

PART - B (5 x 3 = 15 Marks)

6. What are the three criteria necessary for an efficient network?

7. What is the difference between a user agent (UA) and a mail transfer agent (MTA)?

8. What is management information base?

9. What is the difference between diffusion and confusion?

10. Define Storage Area Network.

PART - C (5 x 16 = 80 Marks)

11. (a) Explain in detail about TCP/IP protocol architecture. (16)

Or

(b) (i) Discuss briefly about the layers present in the OSI Model. (8)

(ii) Explain the service primitives and parameters in the OSI architecture. (8)

12. (a) (i) Explain the message transfer using simple mail transfer protocol. (8)

(ii) Describe the HTTP in detail. (8)

Or

(b) Discuss briefly about the multicast routing. (16)

13. (a) (i) Explain the overview of ISDN. (8)

(ii) Explain the concept of Network Management Standards. (8)

Or

(b) (i) Explain the concept of organizational model. (8)

(ii) Explain the architecture of SNMP. (8)

14. (a) (i) Explain in detail about MAC. (8)

(ii) Perform the encryption & decryption for $p=3$, $q=11$, $e=7$ and $m=5$ using RSA algorithm. (8)

Or

(b) (i) Write short notes about digital signature. (8)

(ii) Explain in detail of SSL. (8)

15. (a) Briefly Explain about storage area networks. (16)

Or

(b) (i) Explain in detail about wide area network. (8)

(ii) Explain in detail IEEE 802.11 architecture and services. (8)