8390

B.Tech. (CSE-AI) VIth Semester Examination, 2024

COMPUTER NETWORK

(Computer Science and Engineering and Artificial Intelligence)

Paper : CS–602

Time : 3 Hours]   [M.M. : 70

Note :– Answer any *five* questions. All questions carry equal marks.

1. Draw the OSI-ISO architecture and outline the functions performed by each layer.   [14]

2. Draw the format of TCP packet header and explain each of its field.   [14]

3. (a) Discuss the working of CSMA/CD protocol.

   (b) Differentiate between circuit and packet switching with example.   [7,7]

4. Explain the basics of POP3 and IMAP mail access protocol. [14]

5. What is meant by congestion control ? What are the techniques involved in eliminating it ? [14]

6. Write short notes on the following : [7,7]

(a) What is DNS (domain name system) ? Explain.

(b) List and explain various HTTP request operation.
[7,7]

7. Classless Inter Domain Routing (CIDR) receive a packet with address 131.23.151.76 The Router's routing table has following entries.

Prefix	Output Interface
131.16.0.0/12	3
131.28.0.0/14	5
131.19.0.0/16	2
131.22.0.0/15	1

Which interface packet will be forwarded ? Answer with reason. [14]

8. What are all the possible subnet masks for the Class C address space ? List all the subnet masks in dotted decimal notation, and determine the number of hosts per subnet supported for each subnet mask. [14]

9. A bit stream 1101011011 is transmitted using standard CRC method . The generator polynomial is x^4+x+1. What is actual bit string transmitted ? [14]

10. What is transmission media ? Describe in detail about unguided transmission media. [14]