Reg. No. : ☐☐☐☐☐☐☐☐☐☐☐☐

Question Paper Code : 50395

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2017

Fourth/Fifth/Sixth/Seventh/Eighth Semester

Computer Science and Engineering

CS6551 : COMPUTER NETWORKS

(Common to Biomedical Engineering, Electronics and Communication Engineering,
Mechatronics Engineering, Information Technology)

(Regulations 2013)

Time : Three Hours   Maximum : 100 Marks

Answer ALL questions

PART – A   (10×2=20 Marks)

1. Define the terms : Bandwidth and Latency.

2. Compare Byte-oriented versus Bit-oriented protocol.

3. Show the Ethernet frame format.

4. Highlight the characteristics of datagram networks.

5. Differentiate between forwarding table and routing table.

6. What is Border Gateway Protocol (BGP) ?

7. Compare flow control versus congestion control.

8. What are the approaches used to provide a range of Quality of Service (QoS) ?

9. Write the use of Hyper Text Transfer Protocol (HTTP).

10. What do you mean by Web Services Description Language (WSDL) ?

PART – B   (5×13=65 Marks)

11. a) With a neat sketch, explain the architecture of an OSI seven layer model.   (13)

       (OR)

    b) Discuss the approaches used for error detection in networking.   (13)

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12. a) Explain the functions of Wi-Fi and Bluetooth in detail. (13)

(OR)

   b) i) Explain the datagram forwarding in IP. (7)

     ii) Show and explain the ARP packet format for mapping IP addresses into Ethernet addresses. (6)

13. a) With an example, explain the function of link state routing protocol. (13)

(OR)

   b) Elaborate on multicast routing protocols. (13)

14. a) i) Draw a TCP state transition diagram for connection management. (7)

     ii) Brief about approaches used for TCP congestion control. (6)

(OR)

   b) Write a detailed note on congestion avoidance mechanisms used in TCP. (13)

15. a) i) Explain the function of Internet Message Access Protocol (IMAP) with a state diagram. (8)

     ii) List and explain the various HTTP request operations. (5)

(OR)

   b) i) What is Domain Name System (DNS) ? Explain. (8)

     ii) Brief about the importance of Simple Network Management Protocol (SNMP). (5)

PART – C   **(1×15=15 Marks)**

16. a) Outline the steps involved in building a computer network. Give the detailed description for each step. (15)

(OR)

   b) For the network given in Figure 1, give global distance – vector tables when

     i) Each node knows only the distances to its immediate neighbors. (5)

     ii) Each node has reported the information it had in the preceding step to its immediate neighbors. (5)
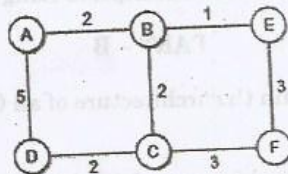
     iii) Step (ii) happens a second time. (5)

Figure 1