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)**

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)**

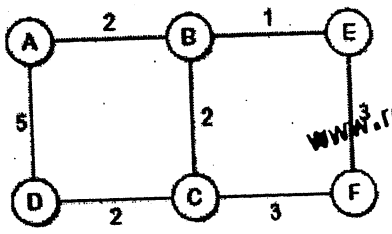

Figure 1