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B.E./B.Tech. DEGREE EXAMINATION, NOV/DEC 2017.

Fourth Semester

Computer Science and Engineering
CS 6551 – COMPUTER NETWORKS
(Regulations 2013)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART – A

(10 x 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. Compare flow control versus congestion control?
7. What is border gateway protocol (BGP)?
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 x 13 = 65 marks)

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

b) Discuss the approaches used for error detection in networking?

12. a) explain the function of Wi-Fi and Bluetooth in details?

Or

b) i) Explain the datagram forwarding in IP?

ii) Show and explain the ARP packet format for mapping IP addresses into Ethernet addresses?

13 a) with an example explain the function of link state routing protocol?

Or

b) elaborate on multicast routing protocols.

14)a) i) Draw a TCP state transition diagram for connection management?

ii) brief about approaches used for TCP congestion control?

Or

b) write a detailed note on congestion avoidance mechanisms used in TCP?

15) a) i) Explain the function of internet message access protocol (IMAP) with a state diagram?

ii) List and explain the various HTTP request operations

Or

b) i) what is Domain Name System (DNS) ? Explain?

ii) brief about the important of Simple Network Management Protocol (SNMP)?

PART –C

(1 x 15 = 15 marks)

16.a) outline the steps involved in building a computer network. Give the detailed description for each step?

Or

b) for the network given in figure 1 give global distance – vector tables when

i) each node knows only the distance to its immediate neighbors.

ii) each node has reported the information it had in the preceding step to its immediate neighbors.

iii) step (ii) happens a second time.