G 1222   (Pages : 2)   Reg. No..............................

                                                 Name.................................

B.TECH DEGREE EXAMINATION, MAY 2015

Sixth Semester

Branch : Computer Science and Engineering

CS 010 604—COMPUTER NETWORKS (CS)

(New scheme—2010 admission onwards)

[Regular/Improvement/Supplementary]

Time : Three Hours   Maximum : 100 Marks

Part A

*Answer **all** questions.*
Each question carries 3 marks.

1. What is meant by the bandwidth and throughput of a network ? Write down the relation between the bandwidth and throughput.

2. Explain any one byte oriented framing protocol.

3. Describe the concept of source routing.

4. Draw the structure of the TCP header and explain the purpose of the individual fields.

5. Write short notes on peer to peer networks.

                                                     (5 × 3 = 15 marks)

Part B

*Answer **all** questions.*
Each question carries 5 marks.

6. Explain the significance of the delay bandwidth product of a network in detail.

7. Write brief notes on Bluetooth networks.

8. What is the role of a bridge in a network ? Describe the concept of a learning bridge.

9. Explain the adaptive retransmission mechanism used in TCP.

10. Write brief notes on the SNMP protocol.

                                                     (5 × 5 = 25 marks)

Part C

*Answer **all** questions.*
Each full question carries 12 marks.

11. Write detailed notes on salient features of a layered network architecture. Explain the ISO OSI network architecture.

Or

                                                         Turn over

12. Describe the various requirements that need to be satisfied by a computer network in detail.

13. Explain the different ARQ mechanisms used to ensure reliable transmission of data in a network.

Or

14. Write detailed notes on the characteristics of 802.3 Ethernet.

15. Describe the distance vector routing algorithm in detail.

Or

16. What is an internetwork ? Explain the service model of the Internet Protocol.

17. Write detailed notes on the Remote Procedural Call mechanism.

Or

18. Explain the various methods used by TCP for congestion control.

19. Explain the functioning of HTTP in detail.

Or

20. Write detailed notes on the concept of the Domain Name System.

$(5 \times 12 = 60 \text{ marks})$