B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, MARCH 2020

Sixth Semester

Core Course—COMPUTER NETWORKS

[For B.Sc. Electronics and B.Sc. Computer Maintenance and Electronics]

(2013—2016 Admissions)

Time : Three Hours   Maximum Marks : 80

Part A (Short Answer Questions)

Answer all questions briefly.
Each question carries 1 mark.

1. In OSI network architecture framing is done by ——————.

2. Define simplex mode of transmission

3. What is attenuation ?

4. Mention the different topologies.

5. Which sublayer of the data link layer performs data link functions that depend upon the type of medium ?

6. What is IP (Internet protocol) ?

7. What is the main function of IGMP ?

8. Mention any three application layer protocols.

9. Which multiplexing technique transmits digital signals ?

10. Name the transport layer protocols used in networking.

(10 × 1 = 10)

Part B

Answer any eight questions.
Each question carries 2 marks.

11. Mention the types of errors.

12. For n devices in a network, what is the number of cable links required for a mesh and ring topology ?

Turn over

13. Define flow control.

14. What is meant by bit stuffing ?

15. What is meant by router ?

16. What is piggy backing ?

17. What is meant by congestion ?

18. What is the purpose of Domain Name System ?

19. What is meant by quality of service ?

20. Find the class of each address :

     (a) 00000001 00001011 00001011 1110111.

     (b) 14.23.120.8.

21. Differentiate TCP and UDP.

22. Write a brief note on the benefits of optical fibre.

$(8 \times 2 = 16)$

Part C

Answer any six questions.
Each question carries 4 marks.

23. Write short notes on CRC.

24. Differentiate between pure ALOHA and SLOTTED ALOHA.

25. Define checksum.

26. Mention the advantage and disadvantage of stop and wait flow control.

27. Mention any four internetworking devices ?

28. Explain HDLC.

29. Write the keys for understanding the link state routing.

30. What is the function of SMTP ?

31. What are the advantages and disadvantages of public key encryption ?

$(6 \times 4 = 24)$

Part D

Answer any two questions.
Each question carries 15 marks.

32. Explain distance vector routing algorithm with neat diagram.

33. What are the advantages of having layered model of networking ? Explain OSI model mentioning the functions of different layers.

34. Write short notes on the following :

(a) Email.

(b) HTTP.

35. Discuss the role of transport layer in detail.

(2 × 15 = 30)