TDC (CBCS) Odd Semester Exam., 2021
held in March, 2022

COMPUTER APPLICATION

(3rd Semester)

Course No. : BCACC–303T

(Computer Networks)

Full Marks : 50
Pass Marks : 20

Time : 3 hours

The figures in the margin indicate full marks for the questions

SECTION—A

Answer any *ten* questions : 2×10=20

1. What is network topology? Which topology is the most fault tolerant?

2. What are the advantages of layered network architecture in computer networks?

3. State the differences between digital and analog signals.

4. Why is a modem required in a computer network?

5. Write the advantages of packet switching.

6. How much bandwidth does cable TV use? Do cable companies know what you are watching?

7. What is point-to-point protocol on Internet? Give example.

8. Write down the functions of data link layer.

9. Do you need a router if you have a modem? Justify your answer.

10. What is IP address? How does one know the IP address of a website?

11. What are the differences between TCP and UDP?

12. What is protocol? End-to-end connection is established through which protocol of the TCP/IP suite?

13. Define DNS protocol.

14. Why do we need HTTP protocol?

15. Which layer is responsible for error control and flow control? Mention one protocol which can control both error and flow.

SECTION—B

Answer any *five* questions : 6×5=30

16. Write the importance of OSI reference model. Also write down the functions of data link, transport and application layers in OSI model. 1½+4½=6

17. What is transmission media? Explain its different types. 6

18. What are connectionless and connection-oriented services? Give example of each. 3+3=6

19. What is network switching? Explain the different types of network switching. 1+5=6

20. Explain the different error correction and error detection techniques used in data link layers. 6

21. Write down the functions of the following : $1\frac{1}{2}\times4=6$

(a) Hub

(b) Switch

(c) Router

(d) Gateway

22. Explain the different layers of TCP/IP. 6

23. What does the routing algorithm generate? What are the desirable properties of routing algorithm? Explain any one routing algorithm. $1+1+4=6$

24. Explain the architecture of WWW. 6

25. Explain the connection establishment and release phases of TCP. 6

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