TDC (CBCS) Odd Semester Exam., 2019

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

UNIT—I

1. Answer any *two* of the following questions : 2×2=4

(a) How can data flow be done in data communication?

(b) Write down the difference between star and bus topology.

(c) A noiseless channel with a bandwidth of 3000 Hz transmitting a signal with two signal levels. Find the maximum bitrate.

2. Explain the difference between TCP/IP reference model and OSI reference model. 6

OR

3. *(a)* Draw the graph of the Manchester and differential Manchester scheme using the following data stream : 1½+1½=3

010011

(b) Explain analog to digital conversion techniques with diagram. 3

UNIT—II

4. Answer any *two* of the following questions : 2×2=4

(a) Why is switching needed? Give example.

(b) Draw a datagram network with four switches.

(c) Write a short note on modem.

5. What are circuit switching and packet switching? Write down the difference between these two. 2+4=6

OR

6. *(a)* Define virtual circuit switching. How can addressing be made in virtual circuit network? 3

(b) What is digital subscriber line (DSL)? Briefly explain different types of DSL. 3

UNIT—III

7. Answer any *two* of the following questions : 2×2=4

(a) Define switches and router.

(b) Find the Hamming distance :

(i) (00110011, 11000011)

(ii) (10101010, 01010011)

(c) What is backbone network? Explain with example.

8. What is cyclic code? Explain CRC technique of error detection with example. 1+5=6

OR

9. Explain stop-and-wait ARQ. What is piggybacking? 4+2=6

UNIT—IV

10. Answer any *two* of the following questions : 2×2=4

(a) Define subnet and subnet mask.

(b) What are Net ID and Host ID?

(c) Identify the class after IP address 192.168.1.1. How many bytes are required to store the IP address?

11. *(a)* Briefly explain classful addressing. Give example. 3

(b) Write down the difference between IPv4 and IPv6. 3

OR

12. What is the objective of routing algorithm? Explain distance vector routing algorithm. 2+4=6

UNIT—V

13. Answer any *two* of the following questions : 2×2=4

(a) Mention two important objectives of transport layer.

(b) Differentiate between IP addresses and Port numbers.

(c) Explain various parts of http ://www.aus.ac.in.

14. *(a)* What is the difference between TCP and UDP? 3

(b) Explain HTTP protocol in detail. 3

OR

15. Write short notes on the following : 3+3=6

(a) Domain Name System (DNS)

(b) World Wide Web (WWW)

★★★