K19U 0094

Reg. No. : .....

Name : .....

VI Semester B.Sc. Degree (CBCSS-Reg./Supple./Improv.) Examination, April 2019
(2014 Admission Onwards)
CORE COURSE IN COMPUTER SCIENCE
6B14CSC : Data Communication and Networks

Time : 3 Hours Max. Marks : 40

SECTION – A

1. **One** word answer : **(8×0.5=4)**
   a) Systems that are open for communication with other systems are called _____
   b) In which method, the boundary between two frames can be unambiguously recognized by the flag pattern ?
   c) If connection-oriented service is used, a path from the source router all the way to the destination router must be established before any data packets can be sent is called _____
   d) Which algorithms do not base their routing decisions on any measurements or estimates of the current topology and traffic ?
   e) The software and/or hardware within the transport layer that does the work is called _____
   f) Which option in TCP lets a receiver tell a sender the ranges of sequence numbers that it has received ?
   g) Character-for-character or bit-for-bit transformation, without regard to the linguistic structure of the message is called _____
   h) OSI stands for _____

SECTION – B

Write short notes on **any seven** of the following questions : **(7×2=14)**

2. What are the advantages of star topology ?
3. What is network virtual terminal ?

P.T.O.

4. What are the functions of data link layer ?
5. What is admission control ?
6. List the file transfer protocols.
7. Which are the two fundamental principles of cryptography ?
8. What is whitening ?
9. What is congestion ?
10. What is the need of error control ?
11. What is service point addressing ?

SECTION – C

Write short notes on **any four** of the following questions : **(4×3=12)**

12. Discuss fundamental characteristics of data communication.
13. Discuss the responsibilities of network layer.
14. What is store and forward switching ?
15. What is leaky bucket algorithm ?
16. Compare the features of TCP and UDP.
17. Explain DES chaining.

SECTION – D

Write short notes on **any two** of the following questions : **(2×5=10)**

18. Discuss the types of unguided media.
19. Explain Dijkstra's shortest path algorithm.
20. How connection is established by the transport layer ?
21. Discuss substitution cipher.