K20U 0099

Reg. No. : .....

Name : .....

VI Semester B.Sc. Degree (CBCSS-Reg./Supple./Improv.) Examination, April 2020
(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) In a _____ topology, every device has a dedicated point-to-point link to every other device.
   b) In which method, the boundary between two frames can be unambiguously recognized by the flag pattern ?
   c) If connectionless service is offered, packets are injected into the network individually and routed independently of each other is called _____
   d) If we allow all of the possible paths to be chosen, the tree becomes a more general structure called _____
   e) The rate at which useful packets are delivered by the network is called
   f) Expand PAWS.
   g) A key length of two digits means that there are _____ possibilities.
   h) Which cipher reorder the letters but do not disguise them ?

SECTION – B

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

2. What are frames ?
3. What is burst error ?
4. What are adaptive algorithms ?

P.T.O.

5. What are the functions of data link layer ?
6. Differentiate connection-oriented and connectionless transport service.
7. What is admission control ?
8. State optimality principle.
9. What is the use of portmapper ?
10. What is simplex transmission ?
11. What are the functions of presentation layer ?

SECTION – C

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

12. Discuss the components of data communication.
13. What are the advantages of Fiber Optic Cables ?
14. What is token bucket algorithm ?
15. Explain three protocol scenarios for establishing a connection using a three-way handshake.
16. What is two-army problem ?
17. What are substitution ciphers ?

SECTION – D

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

18. Discuss the working of Simplex Stop-and-Wait Protocol for an Error-Free Channel.
19. How connection is released by the transport layer ?
20. Describe UDP header.
21. Discuss encryption model with the help of block diagram.