



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 ?

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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.
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