

**17U669**

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Name: .....

Reg. No.....

**SIXTH SEMESTER B.C.A. DEGREE EXAMINATION, APRIL 2020**

(CUCBCSS-UG)

**CC17U BCA6 B13 - COMPUTER NETWORKS**

Computer Application–Core Course

(2017 Admission – Regular)

Time: Three Hours

Maximum: 80 Marks

**PART A**

Answer *all* questions. Each question carries 1 mark.

1. Write any two advantages of using fiber optic cables in physical layer.
2. Differentiate bit rate and baud rate.
3. What is LRC?
4. What is the concept of sliding window in Data Link Layer protocols?
5. Give an example for class ‘A’ address.
6. Name a protocol which is used to map physical address to logical address.
7. What does IANA stands for?
8. What is a choke packet?
9. What is the use of SNMP?
10. Suppose in a substitutional cipher, if each alphabet is replaced by its third successive alphabet how will you encrypt BEAUTIFUL? (Hint: A will be changed to D)

**(10 x 1 = 10 Marks)**

**PART B**

Answer *all* questions. Each question carries 2 marks.

11. What are the four levels of addresses used in TCP/IP protocols?
12. What are virtual circuit networks?
13. Explain stop and wait protocol.
14. What is Slotted ALOHA? How is it better than pure ALOHA?
15. Write a note on ICMP used in network layer.
16. What is the difference between Byte number and sequence number in TCP?
17. What is the role of FTP in networking?
18. What are modern block ciphers?

**(8 x 2 = 16 Marks)**

### **PART C**

Answer any *six* questions. Each question carries 4 marks.

19. Explain in detail how radio waves help in wireless transmission.
20. Define different types of multiplexing.
21. Explain CSMA and its persistent methods.
22. Write in detail about how Bluetooth works.
23. How does ARP maps logical to physical address?
24. What is the role of IGMP in network layer?
25. Explain UDP in detail.
26. Explain the three way handshaking mechanism in TCP.
27. What are digital signatures?

**(6 x 4 = 24 Marks)**

### **PART D**

Answer any *three* questions. Each question carries 10 marks.

28. With a neat diagram explain the layers and its responsibilities of OSI model.
29. Explain the following error detection and correction mechanisms
  - a. Cyclic Redundancy Check
  - b. Hamming Code
30. With the help of an example, explain how Link State Routing helps in forwarding packets in network layer.
31. Explain in detail the working of email.
32. Explain in detail about asymmetric key cryptography using RSA algorithm.

**(3 x 10 = 30 Marks)**

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