

**19U646S**

(Pages: 2)

Name: .....

Reg. No.....

**SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2022**

(CUCBCSS-UG)

**CC17U BCS6 B13 - COMPUTER NETWORKS**

(Computer Science - Core Course)

(2017, 2018 Admissions – Supplementary/Improvement)

Time: Three Hours

Maximum: 80 Marks

**PART A**

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

1. Give an example for class 'A' address.
2. What is a choke packet?
3. What is a burst error? How is its length calculated?
4. What is LRC?
5. Give an example for IPV4 address.
6. Expand the acronym IGMP.
7. What are modern block ciphers?
8. Write any two differences between OSI and TCP/IP model.
9. How is plain text, key and cipher text related?
10. What is a digital signature?

**(10 × 1 = 10 Marks)**

**PART B**

Answer *all* questions. Each question carries 3 marks.

11. Explain UDP in detail.
12. What are virtual circuit networks?
13. Write a note on traditional symmetric key ciphers.
14. What is the role of FTP in networking?
15. Write the applications of routers, bridges and repeaters.

**(5 × 3 = 15 Marks)**

**PART C**

Answer any *five* questions. Each question carries 5 marks.

16. What is Slotted ALOHA? How is it better than pure ALOHA?
17. What are modern block ciphers?
18. Explain the closed loop congestion control mechanisms.
19. Differentiate the various switching techniques used in physical layer.

20. Explain CSMA and its persistent methods.
21. Explain stop and wait protocol.
22. Explain the three way handshaking mechanism in TCP.
23. Explain asymmetric key cryptography with reference to RSA.

**(5 × 5 = 25 Marks)**

#### **PART D**

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

24. Explain the error detection and correction mechanisms in data link layer.
25. With a neat diagram explain the layers and its responsibilities of OSI model.
26. Explain in detail the working of email.
27. What is Hamming code? Enumerate the steps needed to generate a Hamming code for a 7-bit codeword. Demonstrate with an example.
28. Explain in detail about guided media transmission in physical layer.

**(3 × 10 = 30 Marks)**

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