

20U688S

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Name:

Reg. No:

SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2023

(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. Find the even parity bit for the data word 1111.
2. Define parity bits.
3. What is DHCP?
4. What are protocols?
5. What is the size of a MAC address?
6. Define LAN and WAN
7. List various protocols in Transport layer.
8. What is the throughput of slotted ALOHA?
9. What is half-duplex communication?
10. What is encryption?

(10 × 1 = 10 Marks)

Part – B

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

11. What is ARQ?
12. Define the term Hashing.
13. Distinguish between a Router and Switch.
14. What are keys in cryptography?
15. What are the functions of datalink layer in OSI model?

(5 × 3 = 15 Marks)

Part – C

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

16. Explain three-way handshaking protocol.
17. Compare Bus and Ring topologies.
18. Explain the Store and Forward mechanism of message switching.
19. Explain cryptography.

20. Explain VRC and LRC methods of error detection using suitable examples.
21. Write a detailed note on Line discipline methods.
22. How does CSMA/CD detect collision in wired network?
23. Explain the RSA algorithm for asymmetric key cryptography.

(5 × 5 = 25 Marks)

Part – D

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

24. Explain about the layered model of OSI. Explain with suitable diagram.
25. Compare Go-Back-N-ARQ and Selective Repeat ARQ
26. Explain various random access protocols in details.
27. Define Topology. Explain various types of topologies?
28. Explain the various Error control methods in Datalink layer.

(3 × 10 = 30 Marks)
