

**16U633**

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Name: .....

Reg. No.....

**SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2019**

(Regular/Improvement/Supplementary)

(CUCBCSS-UG)

**CC15U BCS6 B14 - COMPUTER NETWORKS**

(Computer Science – Core Course)

(2015-Admission onwards)

Time: Three Hours

Maximum: 80 Marks

**Part - A**

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

1. In ----- transmission data can flow in both direction simultaneously.
2. The process of sending digital data as digital signals is known as ----- transmission.
3. Name the most popular UTP connector.
4. Find the even parity bit for the data word 1111.
5. What is the throughput of simple ALOHA?
6. In classful addressing, 121.32.45.90 is an IP address belonging to class -----
7. If the IP address of one of the host in the block is 182.44.82.16/26, what is the last address of the block?
8. BOOTP is used in ----- layer of TCP/IP.
9. Expand SNMP.
10. In ----- cryptography, the sender and receiver use the same key to encrypt and decrypt.

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

**Part - B**

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

11. How does a WAN differ from LAN?
12. What is the basic idea behind stop and wait protocol in noiseless channel?
13. How does CRC work?
14. When and where is SCTP used?
15. Differentiate persistent and non-persistent connection in HTTP.

**(5 x 2 = 10 Marks)**

### Part - C

Answer any *five* questions. Each question carries 4 Marks

16. Compare and contrast any three network physical topologies.
17. Coaxial cables can carry signals of higher frequencies for longer distances. State the reason.
18. How does CSMA/CD detect collision in wired network? Explain.
19. Elaborate on the working of Bluetooth.
20. Elaborate on Address Resolution Protocol.
21. Briefly describe about User Datagram Protocol used in transport layer.
22. Differentiate iterative resolution and recursive resolution in DNS.
23. How are files transferred using FTP?

**(5 x 4 = 20 Marks)**

### Part - D

Answer any *five* questions. Each question carries 8 marks.

24. With a neat diagram, explain how OSI model is used for communication in network.
25. Explain the transmission using
  - a. Optical Fibres
  - b. Radio waves
  - c. IR waves
26. Explain the role of Hamming distance in error correction and detection. Assume the dataword used is 11010011. Find the codeword using Hamming code. Also explain how the error is detected and corrected at the receiver's end.
27. Compare Go back N ARQ and selective repeat ARQ.
28. Explain the role of ICMP in detail.
29. With the help of an example, explain how distance vector routing approach helps in routing.
30. How does TCP establish and terminate a connection?
31. Explain the working of e-mail.

**(5 x 8 = 40 Marks)**

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