TB174195C **Reg.No: …….....**

Name.....

B. Sc. DEGREE (C.B.C.S.S) EXAMINATION, MARCH 2019
(2017 Admissions Regular, 2016 Admissions Improvement/Supplementary & 2015 Admissions Supplementary)
SEMESTER IV –CORE COURSE (COMPUTER APPLICATIONS)
CAC4B10TB - DATA COMMUNICATION AND NETWORKS

Time: Three Hours **Maximum Marks: 80**

PART A

I Answer all questions. Each question carries 1 mark

1. Define Data Communication
2. For n devices in a network, what is the number of cable links required for a mesh topology?
3. The data transmitted is 100110101 and received is 100101011, what type of error occurred?
4. Name the Major components of a telephone network.
5. Which are the two methods of variable length framing?
6. What is the length of an IPV6 address in bits?

(6x1=6)

PART B

II Answer any seven questions. Each question carries 2 marks

7. List out different types of Networks.
8. A page is an average of 24 lines with 80 characters in each line. If one character requires 8 bits, find the bit rate.
9. What are the different forms of Noise.
10. Define Hamming Distance
11. Explain Persistence Methods – 1-persistant ,Non-persistant ,p-persistant.
12. Explain the concept of FTP
13. Explain Stop and Wait Protocol
14. What is the significance of twisting in twisted paircable?
15. Explain different types of Addresses used in TCP-IP model.
16. Expand HDLC.

(7x2=14)

PART C

III Answer any five questions. Each question carries 6 marks

17. Explain briefly the categories of physical topology.
18. Explain Frequency Hopping Spreading Spectrum technique.
19. Write short notes on Dial up Modems.
20. Assume that a voice channel occupies a bandwidth of 4 kHz. We need to combine three voice channels into a link with a bandwidth of 12 kHz. Show the configuration, using the frequency domain. Assume there are no guard bands.
21. Explain the concept of ALOHA
22. Explain CDMA
23. Explain with an example the concept of Checksum bit
24. What are the different types of Addresses used in TCP-IP model.

(5x6=30)

PART D

IV Answer any two questions. Each question carries 15 marks

25. Explain in detail the ISO – OSI reference Model.
26. Explain in detail the Multiplexing Techniques.
27. What is Data Correction and Detection Code? Explain any two with suitable example.
28. Encrypt "EXTRANET" using a transposition cipher with the following key:

3	5	2	1	4
1	2	3	4	5

(2x15=30)