D 90182 (Pages : 2) Name.....

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FIFTH SEMESTER B.TECH. (ENGINEERING) [09 SCHEME] DEGREE EXAMINATION, NOVEMBER 2015

CS/IT/PTCS 09 505—DIGITAL DATA COMMUNICATION

Time : Three Hours Maximum : 70 Marks

Part A

Answer **all** *questions.*

1. The power we use at home has a frequency of 50 Hz. Then what is the period of this sine wave ?
2. What is Jitter ?
3. Define the characteristics of a self synchronizing signal.
4. What are intra LATA and inter LATA services ?
5. Draw point to point frame format.

(5 × 2 = 10 marks)

Part B

Answer any **four** *questions.*

6. What are the advantages of optical fiber over twisted pair and coaxial cable ?
7. What is checksum ? How can we represent the number 21 in one's complement arithmetic using only four bit.
8. Explain virtual circuit identifier with diagram ?
9. How data transfer is achieved using CATV channels.
10. Write an algorithm for Go-Back-N receiver and explain.
11. Define piggybacking and its usefulness ?

(4 × 5 = 20 marks)

Part C

12. Explain digital to digital conversion of data in detail.

Or

13. Explain unguided media in detail and list out the applications for each.
14. Explain pulse code modulation in detail.

Or

Turn over

15. Derive the algorithm of Huffman coding. Apply this coding to an example and explain.

16. Explain CABLE TV networks and its functionality in detail.

Or

17. Explain circuit switched networks in detail.

18. What are the two protocols used in noisy channels ? Explain in detail.

Or

19. Explain point to point protocol in detail.

(4 × 10 = 40 marks)