LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.Sc. DEGREE EXAMINATION – **PHYSICS**

THIRD SEMESTER – NOVEMBER 2016

PH 3954 - DATA COMMUNICATION & COMPUTER NETWORKS

Date: 09-11-2016 Dept. No. Max. : 100 Marks

Time: 09:00-12:00

PART - A

Answer **ALL** questions. **(10 x 2 = 20 marks)**

1. Explain the function of a CODEC.
2. Give the expansion of IBM, ABM, ANSI and WAP.
3. Write a short note on encapsulation.
4. Give 2 examples of definitions of elementary data link protocol.
5. Explain the term 'virtual communication'.
6. Describe 'store and forward packet' switching.
7. Differentiate half duplex and full duplex data exchange.
8. Write a brief note on the closed loop approach to congestion control.
9. Define 'jitter'.
10. List the basic functions supported by E-mail system.

PART - B

Answer **ANY FOUR** questions. **(4 x 7.5 = 30 marks)**

11. Explain the physical description, application and transmission characteristics of (a) twisted pair and (b) coaxial cable. **(3+4.5)**

12. Discuss the CRC method of error detection with a suitable example.
13. Elucidate the salient features of the OSI Model and discuss the reasons for its failure.
14. Explain the leaky bucket algorithm for congestion control and achieving good quality of service.
15. With examples of your own explain the DNS.
16. List the basic elements of Transport Protocol and explain the layout of a TCP segment.

PART - C

Answer **ANY FOUR** questions. **(4 x 12.5 = 50 marks)**

17. Discuss the three basic encoding techniques for transforming digital data into analog signals.
18. Describe the basic characteristics and frame structure of High-level data link control (HDLC) protocol.
19. Give a detailed description of Network Hardware Examples.
20. Explain store and forward packet switching in the network layer and list out the services provided to the transport layer.
21. Discuss in detail, the architectural overview of World Wide Web.
22. Give an account of the various applications of computer networks.

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