



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.Sc. DEGREE EXAMINATION – PHYSICS

THIRD SEMESTER – NOVEMBER 2015

PH 3954 - DATA COMMUNICATION & COMPUTER NETWORKS

Date : 07/11/2015
Time : 09:00-12:00

Dept. No.

Max. : 100 Marks

PART - A

Answer **ALL** questions.

(10 x 2 = 20 marks)

1. What is data communication?
2. If the room temperature is given as 20°C, estimate the thermal power density.
3. List any two services offered by the network layer in the OSI model.
4. Write a brief note on encapsulation.
5. Mention any two disadvantages of the TCP/IP model.
6. Give the structure of a Hybrid model.
7. State and explain the optimality principle.
8. Define 'jitter'.
9. Distinguish between reliable and unreliable communication.
10. With an example explain a Uniform Resource Locator (URL).

PART - B

Answer **ANY FOUR** questions.

(4 x 7.5 = 30 marks)

11. Explain 'framing' with a neat block diagram and discuss the different types of framing.
12. Discuss the origin of the ARPANET.
13. Give a critical account of the OSI model.
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. Give a brief account of the business and home applications of Computer Networks.

PART - C

Answer **ANY FOUR** questions.

(4 x 12.5 = 50 marks)

17. Give an overview of the 'Guided Transmission Media' commonly used.
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. What are transmission impairments? Discuss the most significant impairments.
21. Discuss the architecture and Services of Electronic mail.
22. Explain the three basic encoding techniques for transforming digital data into analog signals.
