LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.Sc. DEGREE EXAMINATION – **COMPUTER SCIENCE**

FIRST SEMESTER – APRIL 2018

17PCS1MC05- ADVANCED COMPUTER NETWORKS

Date: 28-04-2018
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

Part – A

Answer ALL the questions   **10 x 2 = 20 marks**

1. Differentiate between distributed systems and computer networks.
2. State the advantages of network standardization.
3. Mention the design objectives of data link layer.
4. Name any four bit oriented protocols.
5. What is the difference between network layer and data link layer?
6. Why dynamic algorithms are so popular in networking?
7. Enlist any four primitives for a simple transport service.
8. What is IPV6?
9. Notify any two advantages of hoping.
10. Compare Blue tooth and hotspot.

Part – B

Answer ALL the questions   **5x 8 = 40 marks**

11. a) Describe the requirements of various applications in a network **(Or)**

    b) With a neat diagram, explain the design of internet architecture.

12. a) Explain briefly about Flag bytes with byte stuffing with an example (**Or**)

    b) Propose a method to do detect the errors during transmission and discuss.

13. a) Discuss the network layer design issues (**Or**)

    b) Describe about Distance Vector Routing and the challenges in implementation.

14. a) Illustrate the three way hand shake method to establish a connection (**Or**)

    b) Briefly explain forward and downward multiplexing with a diagram.

15. a) With a neat diagram, explain Scatter-Net Architecture **(Or)**

    b) Discuss the merits and challenges of Wireless LANs.

Part – C

16. a) Propose an elegant model better than OSI and TCP/IP and explain.

    b) Discuss the merits in guided transmission media and the challenges in non-guided transmission media.

17. a) Develop a suitable method to do error correction in data link layer.

    b) Explain in detail about the congestion control mechanisms.

18. a) Describe about the HyperLan2 reference model.

    b) Illustrate TCP connection management finite state mechanism with a diagram.

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