LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.Sc. DEGREE EXAMINATION - **COMPUTER SC.**

FIRST SEMESTER – **APRIL 2013**

CS 1812 - COMPUTER NETWORKS

Date : 30/04/2013 Dept. No. Max. : 100 Marks
Time : 9:00 - 12:00

Part A

ANSWER ALL THE QUESTIONS. **10 x 2 = 20 Marks**

1. List out the messages that are exchanged to get a webpage from the server.
2. Define the terms bandwidth and Latency.
3. Draw the diagram of Ethernet hub.
4. Write the significance of blue tooth.
5. State the limitation of Direct Link networks.
6. Name the common approaches to select a port.
7. List the mechanisms for triggering transmission.
8. What is Silly Window Syndrome?
9. Specify the goal of data compression.
10. What are the pieces of information exist in MIME?

Part B

ANSWER ALL THE QUESTIONS. **5 x 8 = 40 Marks**

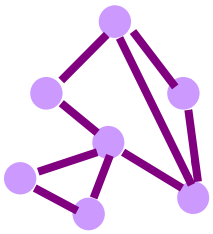
11 a). Present any two framing techniques and discuss their merits (Or)

b). Explain how CRC mechanism identify errors in transmitting 10011010.

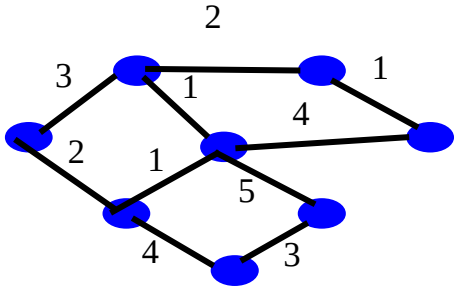
12 a). With a neat diagram, describe how a node failure is handled in Token Ring Network. (Or)

b). How the exposed node problem and the hidden node problem are handled in WIFI.

13 a). Determine minimum spanning tree for the given cyclic graph below (Or)



b). Use Dijkstra algorithm to determine the shortest path for the following graph given below.



14 a). Draw and explain the state transmission diagram for opening and closing a connection
(Or)

b) Discuss the significances of Random Early Detection Method.

15 a). Compare and present any two lossless compression techniques (Or)

b). Explain briefly about the Video compression technique.

Part C

ANSWER <u>ANY TWO</u> QUESTIONS. **2 x 20 = 40 Marks**

16. a). Explain how internet architecture differs from OSI model and discuss the features of internet architecture. (10 Marks)
b). Illustrate any two algorithms used in reliable transmission and discuss their merits and key challenges. (10 Marks)

17 a). Explain how token ring handles node failures and provide the structure of token ring. (10 Marks)
b). With necessary network diagrams, explain about virtual circuit switching. (10 Marks)

18 a). Compare any two TCP congestion control mechanism based on their merits and functionality (10 Marks)

b). Present XML schema definition for handling student information and explain how name clashes are handled in XML. (10 Marks)

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