 LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

FIRST SEMESTER – NOVEMBER 2012

# CS 1812 - COMPUTER NETWORKS

 Date : 03/11/2012 Dept. No. Max. : 100 Marks

 Time : 1:00 - 4:00

Part A

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

1. Draw Internet Protocol Graph.

2. Relate bandwidth with latency.

3. Notify the drawback in Stop-And-Wait Algorithm.

4. What is meant by Concurrent Logical Channels?

5. Figure out flooding of link state packets.

6. Compare Broadcast and Multicast.

7. Specify any four common properties of a “reliable” delivery.

8. What is Silly Window Syndrome?

9. What is MIME? Specify the three pieces of information in a MIME.

10. Compare and differentiate compression algorithms.

Part B

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

11 a). Briefly explain the importance of framing techniques with suitable example.

(Or)

 b). Explain CRC calculation using polynomial long division method.

12 a). With neat diagrams, explain how failure occurs in dual fiber ring.

(Or)

 b). Propose any method to avoid collision in WIFI.

13 a). With block diagram, explain Router implementation.

(Or)

 b). Explain the steps involved in building routing table for the following graph.



14 a). Explain briefly how User Datagram Protocol ensures the reliable delivery.

(Or)

 b). Compare the strengths & weaknesses of Fast Retransmission and Fast Recovery method

 and Slow Start Method.

15 a). Give the general structure of XML model and explain how it is suitable for presentation in

 a heterogeneous environment.

(Or)

 b). Explain how RSA algorithm is suitable for ensuring security.

Part C

ANSWER **ANY TWO** QUESTIONS: 2 x 20 = 40 Marks

16. a). Propose a complete network architecture for an educational institution. (10 Marks)

 b). Compare wireless technologies based on their physical properties. (10 Marks)

17 a). Explain in detail about Dynamic Host Configuration Protocol. (10 Marks)

 b). Draw and explain state transition diagram for the connection establishment and

 termination. (10 Marks)

18 a). With neat diagram, explain Domain Name System (5 Marks) and Simple Mail Transfer

 Protocol. (5 Marks)

 b). Using Distance Vector Routing approach, find out Final Routing Table at Node A for the sample network graph given below. (10 Marks)



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