# LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

FIRST SEMESTER – NOVEMBER 2011

**CS 1812 - COMPUTER NETWORKS**

Date : 03-11-2011                Dept. No.                          Max. : 100 Marks
Time : 1:00 - 4:00

## Part A

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

1. In what way STDM differ from FDM?
2. What is meant by baseline wander?
3. Differentiate Promiscuous mode from Unicast mode.
4. Draw the block diagram of Multi Station Access Unit(MSAU).
5. Define the terms – Congestion and Contention.
6. Differentiate Permanent Virtual Circuit (PVC) from Switched Virtual Circuit(SVC).
7. Stress the need of triggering in transmission.
8. State Congestion Avoidance mechanisms used in a Router.
9. Give Big Endian and Little Endian byte order formats.
10. How to resolve name clashes in XML tags?

## Part B

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

11 a). Explain briefly about i) Stop & Wait method (4 Marks) and
                            ii).Sliding Window method (4 Marks)            **(Or)**

   b). Illustrate the functionality of a Network Adapter in a network.

12 a). Name all the network topologies and classify their strengths and weaknesses.    **(Or)**

   b). How Resilient Packet Ring is superior to Token Ring and Fiber Distributed Data
       Interface?  Explain.

13 a). Explain Forward Search Algorithm with suitable example.            **(Or)**

   b). Explain how Datagram determine forwarding table to send packet from Host A to Host B in the
switched    network given below.
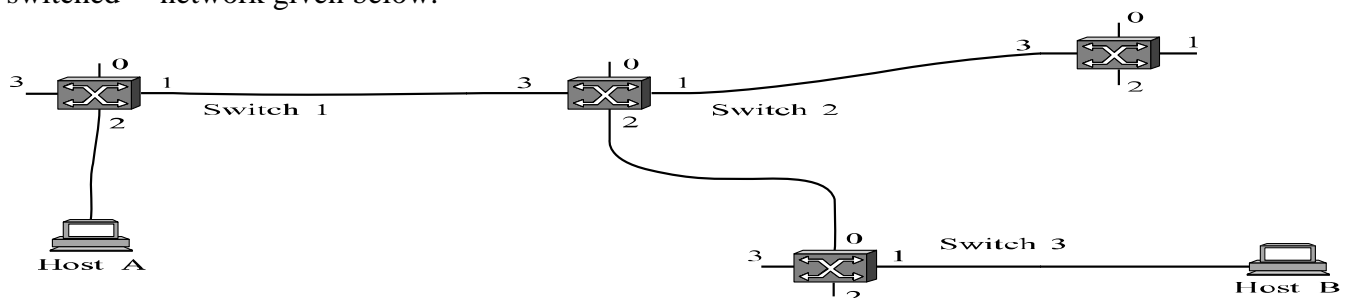
14 a). How UDP ensures reliable delivery? Discuss the strength and weaknesses in UDP demultiplexer approach.  **(Or)**

b). Name all the  TCP congestion control mechanisms and compare their suitability to the present network.

15 a). How Run Length Encoding differ from Differential Pulse Code Modulation and Dictionary based Method? Explain.  **(Or)**

b). Explain briefly how an email is exchanged and differentiate applications from the application protocols  used in this email exchange process.

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

16. a). Give the names of all the framing techniques, stress the need of them in a network and discuss the merits  in detail.
**(10 Marks)**

b). Mention all the types of wireless technologies and their readiness to handle different types of environment.  (10 Marks)

17 a). Illustrate how a Link-State-Routing determine routing table for the example network given below.  **(10 Marks)**
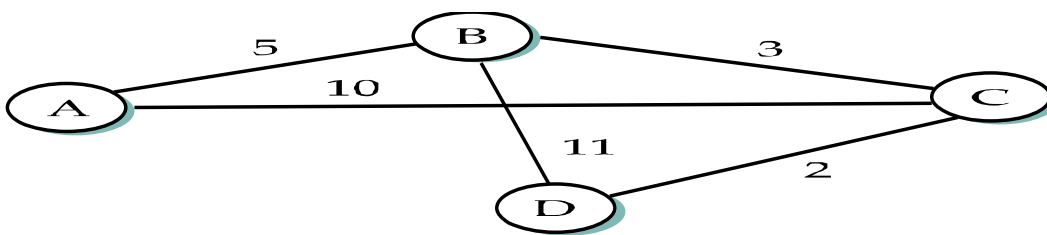


b). Use Distance Vector Routing approach to find  <u>Final Routing Table</u> at Node A for the sample network graph given below.  **(10 Marks)**
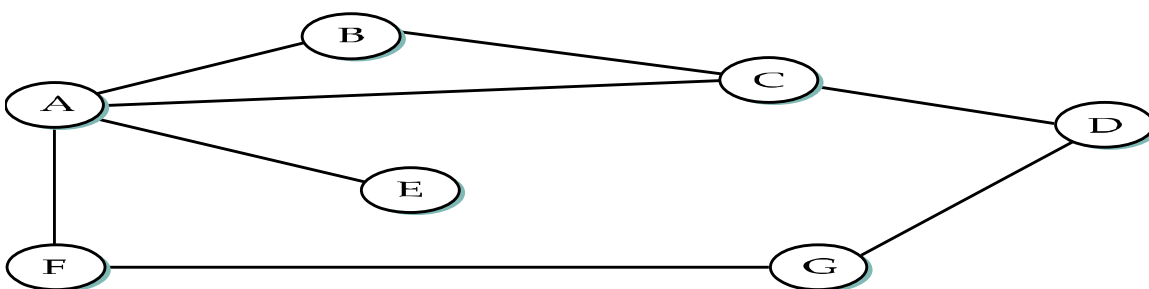


18 a). Discuss the significance of Karn/Patridge algorithm and Jacobson/Karles algorithm. **(10 Marks)**

b). Give RSA Algorithm and discuss how it ensures security in a network**.**  **(10 Marks)**

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