

00532

**MASTER OF BUSINESS ADMINISTRATION  
(NETWORK INFRASTRUCTURE  
MANAGEMENT)  
(MBANIM)**

**Term-End Examination  
June, 2012**

**MCRI-009 : NETWORK DESIGN AND  
MANAGEMENT**

*Time : 3 hours*

*Maximum Marks : 100*

*Note : Attempt any five questions. All questions carry equal marks. Draw neat and clean diagram wherever necessary.*

1. (a) Explain the basic switching concepts and the operation of Cisco Switches ? What is the difference between Hub and Switches ? 10
- (b) Explain how to check the connection status of a network ? Explain the following basic utilities : 10
  - (i) Ping (ii) Traceroute
  - (iii) Telnet (iv) IP config
2. (a) Explain how to identify and resolve common switched network media issues ? Explain some of them. Explain some of the switch hardware failure issues. 10
- (b) What are VLANs ? Also describe how VLANs create logically separate networks ? 10

3. (a) What is VTP pruning ? Explain how to configure and verify VTP ? 10
- (b) What is RSTP protocol ? Explain the RSTP operation. Compare RSTP with HTTP protocol. 10
4. (a) Explain how to show and debug commands to verify the operation status of a Cisco switched network ? 10
- (b) Explain how the basic switch security can be achieved ? Explain switch security on the basis of the following : 10
- (i) Port security
- (ii) Trunk access
5. (a) What is a Router ? Explain the functions performed by a basic Router ? Explain how routing is done with the help of a Router ? Draw diagram. 10
- (b) What do you mean by IP addressing ? What is the difference between private and public IP addressing ? 10
6. (a) What is DHCP and DNS ? Explain how to configure, verify and troubleshoot DHCP and DNS operation on a Router ? 10
- (b) What do you mean by addressing in a LAN environment ? Explain how to implement static and dynamic addressing services for hosts in a LAN ? 10

7. (a) Explain IPv4 addressing ? Also explain the number of hosts and networks achieved by each of classes in the addressing mechanism. **10**
- (b) Calculate and apply an addressing scheme using VLSM IP addressing design to a network. **10**
8. Write short notes on the following : **4x5=20**
- (a) NAT
- (b) EIGRP
- (c) OSPF
- (d) IGP
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