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

Term-End Examination

June, 2011

MCRI-009 : NETWORK DESIGN AND MANAGEMENT

Time : 3 hours *Maximum Marks : 100*

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

1. (a) What are switches ? Explain different **10** models of network switches which support different number of connected devices. What is the difference between Hub and Switches ?

    (b) Explain how to check the connection status **10** of a network ? Explain the following basic utilities :
    (i) ping (ii) Traceroute
    (iii) telnet (iv) ip config

2. (a) Explain how to resolve common switched **10** network media issues ? Explain some of them. What is auto-negotiation ?

    (b) Describe how VLANs create logically **10** separate networks ? Also describe what is need for routing between them ?

3. (a) What is VTP pruning ? Explain how to **10** configure and verify VTP.

   (b) What is RSTP protocol ? Explain the RSTP **10** operation. Compare RSTP with HTTP protocol.

4. (a) Explain how to show and debug commands **10** to verify the operation status of a Cisco switched network ?

   (b) What are the issues related to basic switch **10** security ? Show how port security is achieved and trunk-access is done ?

5. (a) Describe the operation and benefits of using **10** private and public IP addressing. Explain the advantages and disadvantages of each.

   (b) Explain the operation of DHCP and DNS. **10** Also explain the benefits of each. How troubleshooting is done for them ?

6. (a) What do you mean by static and dynamic **10** addressing in a LAN environment ? How the services for hosts are achieved ?

   (b) What is the difference between IPv4 **10** addressing and IPv6 addressing ? A network on the internet has a subnet mask of 255.255.240.0. What is the maximum number of hosts it can handle ?

7. (a) Calculate and apply an addressing scheme **10** using VLSM IP addressing design to a network.

   (b) What are the common problems **10** associated with IP addressing and host configuration ? Explain some of the methods to correct those problems.

8. Write short notes on the following : **10x2=20**

   (a) Cisco Routers.

   (b) Cisco Switches.

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