**Module1- Internetworking  
Qn Nos 1,3,4,8,9,10 &12**

1. What are the different communication modes? Give example for each
2. Give ISO/OSI reference model for computer communication?
3. Explain sliding window protocol for flow control between sending and receiving with a window size 3?
4. Explain the Ethernet addressing with diagram.
5. Explain structure of Ethernet frame format as per IEEE 802.3 standard
6. What is data encapsulation? Explain with diagram?
7. What is cross over cable? give the different use of cross over cables used?

**10 Marks:**

1. Give ISO/OSI reference model for computer communication?
2. Explain Sliding Window Protocol for flow control between sending and receiving with a window size 3.
3. Give the pin connection to create a Straight Through and Cross Over and Roll Over Cable along with its usages.

**Module 2 - VLAN  
Qn Nos: 1,3,5,6,8,9 &10**

1. What is Flat network? What are the drawbacks of flat network?
2. What are the different approaches of VLAN membership? Explain.
3. What are the VLAN tagging method?
4. What are the link types & its significance with VLAN?
5. Write a note on ISL protocol?
6. What are the alternatives available to achieve Routing between two VLANS?
7. Write a note on VTP?

**10 Marks:**

1. Design network with 3 VLANs for an organization. Use a router to implement inter VLAN routing, using IOS commands.
2. What are the different VLAN Tagging methods? Explain each of them in brief.
3. What are the methods to achieve inter VLAN routing? Explain.

**Module 3 - IOS  
Qn Nos: 1,2,3,6,7,8 & 9**

1. What is IOS? Why IOS is used?
2. What is the different alternative to have an access to Cisco device?
3. Describe the procedure of bringing up or booting router?
4. Give the procedure to apply user mode password as well as privilege mode password for Cisco router?
5. Write a note on banners with available with Cisco IOS with example?
6. Give the procedure to assign a IP address for a specific interface?
7. Give the procedure to configure a serial interface with the proper clock rate and bandwidth?

**10 Marks:**

1. What are the various alternative methods to connect to Cisco Router? Give the procedure.
2. What is IOS? What are the activities of a IOS in networking devices? Explain in brief.

**Module 4 - SW MGT  
Qn Nos: 4,5,6,8,9,11,14,15 &17**

1. Give the different CLI modes and its significance with CISCO Switches.
2. What are the different levels of passwords & its significances in a CISCO Switches?
3. Give the procedure to assign passwords to a CISCO Switch.
4. Give the procedure to assign hostname & description for an interface on a CISCO Switch
5. What are the different Duplex settings for a switch interface? Explain.
6. What is the significance of Permanent mac address in mac address table? How to set this add?
7. Give the procedure to create 4 VLANs and assign port membership to each on a Switch
8. Demonstrate an ISL routing on a single router interface to implement inter VLAN routing.
9. What is CDP? Illustrate how to configure CDP on the CISCO Switches.

**10 Marks:**

1. What is ISL Routing? What is its advantage? Demonstrate an ISL routing on a switched network having 4 VLANs defined.
2. What is MAC address table? What are the different types of entries in this table? Give its significance.
3. Give the different methods of security implementation on Switched Networks.

**Module 5 - Router MGT  
Qn Nos: 1,2,5,7,13,14 & 15**

1. What are the component of router? Explain any four of them.
2. Explain the booting procedure of router?
3. What is a Configuration Register? What is its significance? Explain.
4. Give the procedure to recover a password for a Router.
5. Give the procedure to backup and restore CISCO IOS in a Router.
6. Give the procedure to backup and restore CISCO configurations in a Router
7. How to configure the Routers interface with a IP address? Explain

**10 Marks:**

1. What is the different component of a Router? Explain each of them.
2. In detail, explain the Booting process of a Router.
3. With an example illustrate Routing between two host using single Router
4. With an example illustrate Routing between two host using single multiple Router