



BRAINWARE UNIVERSITY

Term End Examination 2020 - 21

Programme – Bachelor of Science (Honours) in Advanced Networking & Cyber Security

Course Name – Switching and Routing

Course Code - BNCSC301

Semester / Year - Semester III

Time allotted : 75 Minutes

Full Marks : 60

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 60=60

1. (Answer any Sixty)

(i) What are unique for half-duplex Ethernet?

- | | |
|---|--|
| a) Half-duplex Ethernet operates in a shared collision domain | b) Half-duplex Ethernet operates in a private collision domain |
| c) Half-duplex Ethernet has higher effective throughput | d) Half-duplex Ethernet operates in a private broadcast domain |

(ii) Convert the binary number 10011101 into its decimal

- | | |
|--------|--------|
| a) 185 | b) 157 |
| c) 169 | d) 158 |

(iii) You have been given the subnet mask of 255.255.255.224. Which IP address would be valid?

- | | |
|------------------|-------------------|
| a) 15.234.118.63 | b) 201.45.116.159 |
| c) 134.178.18.56 | d) 217.63.12.192 |

(iv) What could you use to prevent routing loops in Distance Vector Routing Protocol?

- | | |
|------------------------------------|-----------------------------|
| a) Link-state advertisements (LSA) | b) Split horizon |
| c) Spanning Tree Protocol | d) Shortest path first tree |

(v) What is configuration register value at this point of the password recovery

procedure?

- a) 0x2100
- b) 0x2124
- c) 0x2102
- d) 0x2142

(vi) What feature of a networks switch allows an administrative to create separate broadcast domains?

- a) Store-and-forward switching
- b) Fragment-free switching
- c) Cut-through switching
- d) Virtual LANs

(vii) Which commands could be used to find the name of the IOS image file of each router in the network?

- a) Router# show protocols
- b) Router# show flash
- c) Router# show IOS
- d) Router# show version

(viii) What does the command "ping 204.211.38.52" use to test connectivity between the two devices?

- a) ICMP echo request
- b) Information request
- c) Timestamp reply
- d) Source quench

(ix) Which of the following statement is not characteristic of a typical VLAN arrangement?

- a) VLANs typically increase the number of broadcast domains
- b) VLANs typically decrease the number of broadcast domains
- c) A VLAN can span multiple switches
- d) Trunk links can carry traffic for multiple VLANs

(x) Which command is used to display the placement and direction of an IP access control list on a router?

- a) show ip interface
- b) show ip interface brief
- c) show ip route
- d) show access-list

(xi) Why the Spanning-Tree algorithm is used in a switched LAN?

- a) To prevent routing loops in networks with redundant paths
- b) To segment a network into multiple collision domains
- c) To manage, the addition, deletion, and naming of VLANs across multiple switches.
- d) None of these

(xii) You want to segment a network. Which device is not applicable?

- a) Hub
- b) Bridge
- c) Switch
- d) Router

(xiii) Which of the following is VLAN frame encapsulation type that may be configured on a Cisco switch?

- a) VTP
- b) HTTP
- c) CDP
- d) ISL

(xiv) Which of the following is a Layer 2 protocol used to maintain a loop-free network?

- a) STP
- b) CDP
- c) RIP
- d) VTP

(xv) Which address represents a unicast address?

- a) 224.1.5.2
- b) FFFF.FFFF.FFFF
- c) 192.168.24.58/30
- d) 255.255.255.255

(xvi) Which form of NAT maps multiple private IP addresses to a single registered IP address by using different ports?

- a) overloading
- b) static NAT
- c) dynamic NAT
- d) port loading

(xvii) A catalyst switch must be in which VTP mode in order to delete and add VLANs to a management domain?

- a) Domain
- b) Transparent

c) Client

d) Server

(xviii) How can you confirm that you are in privileged mode?

a) Router#

b) Router(Config-if)#

c) Router(Config)#

d) Router>

(xix) You would to test your personal computer to make sure the TCP/IP has been corrected installed. Which one of the following actions will allow you to test the protocol stack on your personal computer?

a) Telnet 127.0.0.1

b) Tracert 203.125.12.1

c) Ping 127.0.0.0

d) Ping 127.0.0.1

(xx) What is the difference between enable and enable secret passwords?

a) The enable secret password cannot be seen as clear text when viewing the configuration

b) The enable password is encrypted

c) The enable secret password uses IPSec password authentication.

d) The enable secret password acts as a backup in case the enable password is compromised.

(xxi) Which of the following protocols is referred to as a hybrid routing protocol?

a) EIGRP

b) RIP

c) OSPF

d) IGRP

(xxii) Routing Protocols use which OSI layer to determine the best path to a network?

a) Data Link

b) Transport

c) Network

d) Physical

(xxiii) Your router stores routing tables, ARP cache, and packet buffers where are these stored?

- a) ROM
- c) Flash

- b) RAM
- d) NVRAM

(xxiv) Which command displays RIP routing updates?

- a) debug ip rip
- b) show ip route
- c) show protocols
- d) debug ip route

(xxv) What is route poisoning?

- a) It prevents regular update messages from reinstating a route that has just come up.
- b) It is information received from a router that can't be sent back to the originating router
- c) It sends back the protocol received from a router as a poison pill, which stops the regular updates.
- d) It describes when a router sets the metric for a downed link to infinity.

(xxvi) What is the administrative distance of OSPF?

- a) 120
- b) 100
- c) 110
- d) 90

(xxvii) Which of the following is true regarding VLANs?

- a) VTP is used to send VLAN information to switches in a configured VTP domain.
- b) You must have at least two VLANs defined in every Cisco switched network
- c) All VLANs are configured at the fastest switch and, by default, propagate this information to all other switches.
- d) You should not have more than 10 switches in the same VTP domain

(xxviii) Which command will configure a switch port to use the IEEE standard method of inserting VLAN membership information into Ethernet frames?

- a) Switch(config)# switchport trunk encapsulation isl
- b) Switch(config)# switchport trunk encapsulation ietf
- c) Switch(config)# switchport trunk encapsulation dot1q
- d) Switch(config-if)# switchport trunk encapsulation dot1q

(xxix) When a new trunk link is configured on an IOS-based switch, which VLANs are allowed over the link?

- a) By default, all VLANs are allowed on the trunk
- b) No VLAN's are allowed, you must configure each VLAN by hand.
- c) Only configured VLAN's are allowed on the link
- d) Only extended VLAN's are allowed by default

(xxx) You want to improve network performance by increasing the bandwidth available to hosts and limit the size of the broadcast domains. Which of the following options will achieve this goal?

- a) Bridges
- b) Switches
- c) Switches configured with VLANs
- d) Managed hubs

(xxxi) Port Address Translation is also termed what?

- a) Overloading Static
- b) NAT Static
- c) NAT Overload
- d) NAT Fast

(xxxii) Which of the following is true regarding access lists applied to an interface?

- a) One access list may be configured, per direction, for each layer 3 protocol configured on an interface.
- b) You can apply two access lists to any interface.
- c) You can apply only one access list on any interface
- d) You can place as many access lists as you want on any interface until you run out of memory

(xxxiii) What is a VLAN primarily used for?

- a) To segment a collision domain
- b) To segment a broadcast domain
- c) To segment an Autonomous System
- d) None of these

(xxxiv) Which statement about IPv6 addresses is true?

- a) An IPv6 address is 32 bits long,
- b) An IPv6 address is 148 bits long

represented in hexadecimal.

- c) An IPv6 address is 128 bits long
- d) An IPv6 address is 124 bits long

(xxxv) In which layer of OSI model Router works?

- a) Layer 3 Device
- b) Layer 2 Device
- c) Layer 6 Device
- d) Layer 7 Device

(xxxvi) What is split horizon?

- a) It splits the traffic when you have a large bus (horizon) physical network
- b) It holds the regular updates from broadcasting to a downed link.
- c) It prevents regular update messages from reinstating a route that has gone down.
- d) Information about a route should not be sent back in the direction from which the original update came.

(xxxvii) How does a Cisco router filter a packet?

- a) By judging route
- b) Nat Mapping
- c) Not Listed
- d) ACL Rules

(xxxviii) Which protocol can provide connection less communication between hosts?

- a) TCP
- b) IPX
- c) IP
- d) UDP

(xxxix) What is the range of Class C IP Address?

- a) 192-223
- b) 128-190
- c) 191-224
- d) 0-255

(xl) Which of the following are ways to provide login access to a router?

- a) TCP
- b) Fast Ethernet Port
- c) Serial Port 1/0
- d) TELNET

(xli) What would be the proper command to set a DCE clock rate of 56k for a serial interface?

- a) Router (config) # clockrate 56000
- b) Router (config-if) #clock rate 56000
- c) Router# clockrate 56000
- d) Router (config-if) # clockrate 56k

(xlii) You are designing a network which needs to support 200 Computer. You don't plan to extend the segment beyond the current number of Computer. Which subnet mask would best meet your needs? Select the best answer

- a) 255.255.0.0
- b) 255.255.255.128
- c) 255.255.255.0
- d) 255.255.192.0

(xliii) What can a network administrator utilize by using PPP Layer 2 encapsulation?

- a) Authentication
- b) Speed of Communication
- c) Quality of Service
- d) Not Any

(xliv) What is the full form of OSPF?

- a) Open Shortest path Fast
- b) Open Sortest Path Fast
- c) Open Sortest Path First
- d) Open Shortest Path First

(xlv) Which Router Password is stored as encrypted by default?

- a) SSH Password
- b) Enable Secret Password
- c) Enable Password
- d) Telnet Password

(xlvi) What is the full form of VTP?

- a) Virtual Trunk Protocol
- b) VLAN Trunking Protocol
- c) VLAN Trunk Protocol
- d) Virtual Trunking Protocol

(xlvii) Your company wants to reconfigure a Catalyst 2950. Which actions must be taken to erase the old configuration?

- a) Erase the running configuration
- b) Erase flash

c) Restart the switch

d) Erase the startup configuration

(xlviii) Where you can backup IOS of router?

a) TFTP Server

b) FTP Server

c) TFT Server

d) FTPT Server

(xlix) Which command is used to determine VTP mode of switch?

a) Switch # Show VLAN

b) Switch # Show VTP mode

c) Switch # Show VTP

d) Switch # Show VTP Status

(l) What is the name of this mode " Router >"?

a) Router startup mode

b) User Exec Mode

c) Privilege mode

d) Enable Mode

(li) What is the range of standard ACL

a) 0-99

b) 36161

c) 0-100

d) 1-100

(lii) You want to block a system from accessing Web Sites. Which statement will you use?

a) Router(config)# access-list 10 deny tcp
host <host ip> eq 80 any

b) Router(config)# access-list 150 deny tcp
host <host ip> eq 80 any

c) Router(config)# access-list 110 deny tcp
host <host ip> eq 80 www

d) Router(config)# access-list 5 deny tcp
host <host ip> eq 80 web

(liii) You want to erase NVRAM from a switch. Which command will you use?

a) Switch# erase startup-config

b) Switch# erase NVRAM all

c) Switch(config)# erase NVRAM all

d) Switch# erase RAM all

(liv) In which of the following modes in Cisco's IOS can you issue show commands?

- a) Global Configuration
- b) User
- c) Line Configuration
- d) Privileged

(lv) Which of the followings stores 'startup-config'?

- a) ROM
- b) RAM
- c) Flash ROM
- d) NVRAM

(lvi) Default port number of DNS is

- a) UDP 53
- b) TCP 53
- c) UDP 68
- d) TCP 68

(lvii) Which protocol can provide connection oriented communication between hosts?

- a) TCP
- b) IPX
- c) IP
- d) UDP

(lviii) FTP server listens for connection on which port number?

- a) 20
- b) 21
- c) 22
- d) 23

(lix) A bridge handles frames at which of the following layers of the OSI model?

- a) Data Link Layer
- b) Network Layer
- c) Physical Layer
- d) Transport Layer

(lx) Which of the following is used to manage and monitor the network?

- a) SNMP
- b) IP
- c) HTTP
- d) FTP