

Name:	 UPES UNIVERSITY WITH A PURPOSE
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, May 2020

Course: Routing and Switching Essential

Semester: 4th

Program: B.C.A

Time 02 hrs.

Course Code: CSBC 2008

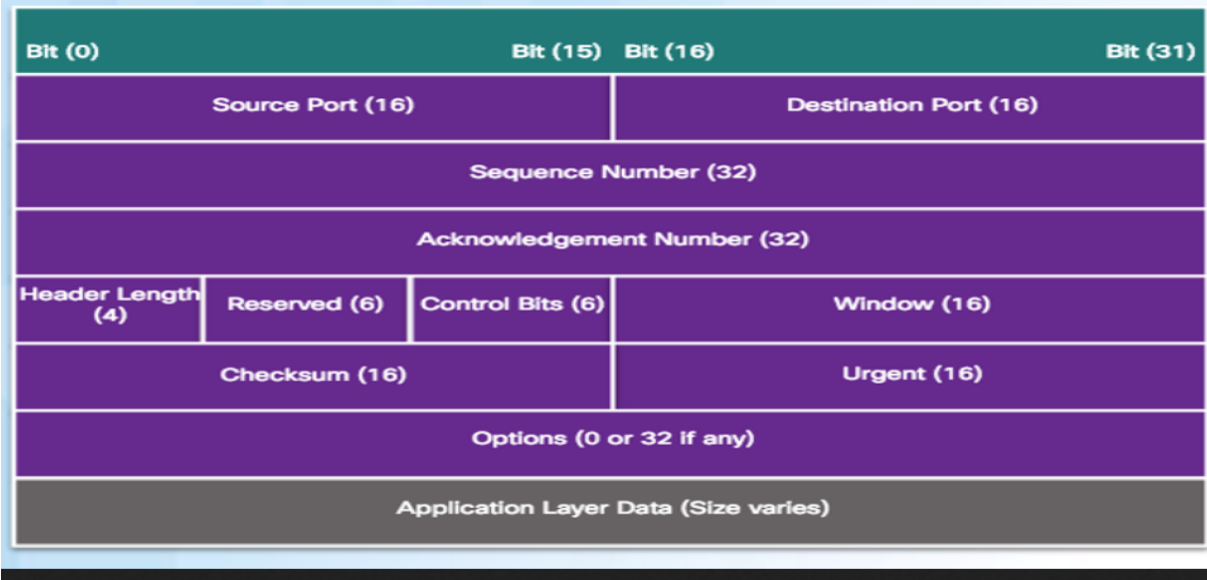
Max. Marks: 100

SECTION A

S. No.		Marks
Q1	<p>A Cisco Catalyst switch has been added to support the use of multiple VLANs as part of an enterprise network. The network technician finds it necessary to clear all VLAN information from the switch in order to incorporate a new network design. What should the technician do to accomplish this task.</p> <ul style="list-style-type: none"> <input type="radio"/> Erase the startup configuration and reboot the switch <input type="radio"/> Erase the running configuration and reboot the switch <input type="radio"/> Delete the IP address that is assigned to the management VLAN and reboot the switch <input type="radio"/> Delete the startup configuration and the vlan.dat file in the flash memory of the switch and reboot the switch. 	2
Q2	<p>Administrative Distance (AD) represents trustworthiness of a root. pick which of the following AD is correctly matched.</p> <ul style="list-style-type: none"> <input type="radio"/> Static -- 0 <input type="radio"/> Connected --1 <input type="radio"/> Both <input type="radio"/> none 	2
Q3	<p>The buffers for packet processing and the running configuration file are temporarily stored in which type of router memory</p> <ul style="list-style-type: none"> <input type="radio"/> Flash <input type="radio"/> NVRAM <input type="radio"/> RAM <input type="radio"/> ROM 	2
Q4	<p>Which of the following is an incorrect difference between static and dynamic routing.</p> <ul style="list-style-type: none"> <input type="radio"/> Dynamic routing automatically adapts to topology changes. 	2

	<ul style="list-style-type: none"> <input type="radio"/> Dynamic routing is more secure than static routing . <input type="radio"/> Dynamic routing is more resource hungry than static routing. <input type="radio"/> All 	
Q5	<p>What is a result of connecting two or more switches together?</p> <ul style="list-style-type: none"> <input type="radio"/> The number of broadcast domains is increased. <input type="radio"/> The size of the broadcast domain is increased. <input type="radio"/> The number of collision domains is reduced. <input type="radio"/> The size of the collision domain is increased. 	2
Q6	<p>Which of the following is not correctly matched with port number.</p> <ul style="list-style-type: none"> <input type="radio"/> SMTP - 25 <input type="radio"/> FTP - 20/21 <input type="radio"/> HTTP -80/8080 <input type="radio"/> IMAP -100 	2
Q7	<p>When a host sends a packet to a device on a different IP network;</p> <p>The packet is forwarded to</p> <ul style="list-style-type: none"> <input type="radio"/> The Host <input type="radio"/> Default Gateway <input type="radio"/> Google <input type="radio"/> Hub 	2
Q8	<p>Which kind of message is sent by a DHCP client when its IP address lease has expired.</p> <ul style="list-style-type: none"> <input type="radio"/> a DHCPDISCOVER broadcast message <input type="radio"/> a DHCPREQUEST broadcast message <input type="radio"/> a DHCPREQUEST unicast message <input type="radio"/> a DHCPDISCOVER unicast message 	2
Q9	<p>What is the difference between UDP and TCP?</p> <ul style="list-style-type: none"> <input type="radio"/> Both are transport layer protocol <input type="radio"/> Both are reliable protocol <input type="radio"/> TCP is reliable whereas UDP is best effort <input type="radio"/> UDP is reliable whereas TCP is best effort 	2

Q10	<p>When configuring a switch to use SSH for virtual terminal connections, what is the purpose of the crypto key generate rsa command.</p> <ul style="list-style-type: none"> <input type="radio"/> show active SSH ports on the switch <input type="radio"/> disconnect SSH connected hosts <input type="radio"/> create a public and private key pair <input type="radio"/> access the SSH database configuration 	2
Q11	<p>Which of the following is incorrect about port security.</p> <ul style="list-style-type: none"> <input type="radio"/> Port security limits the number of valid MAC addresses allowed to transmit data through switch port. <input type="radio"/> If a port has port security enabled and an unknown MAC address sends data, the switch adds it to security list <input type="radio"/> Disabling sticky learning converts sticky MAC addresses to dynamic secure addresses and removes them from the running-config. <input type="radio"/> None 	2
Q12	<p>Which of the following is a responsibility of transport layer.</p> <ul style="list-style-type: none"> <input type="radio"/> Tracking the conversation <input type="radio"/> Segmentation <input type="radio"/> Multiplexing <input type="radio"/> All 	2
Q13	<p>A small company has a web server in the office that is accessible from the Internet. The IP address 192.168.10.15 is assigned to the web server. The network administrator is configuring the router so that external clients can access the web server over the Internet. Which item is required in the NAT configuration?</p> <ul style="list-style-type: none"> <input checked="" type="radio"/> an IPv4 address pool <input type="radio"/> an ACL to identify the local IPv4 address of the web server <input type="radio"/> the keyword overload for the ip nat inside source command <input type="radio"/> The IP NAT inside source command to link the inside local and inside global address 	2
Q15	<p>Which of the following is incorrectly matched? Follow the Diagram</p>	2



Control bits – purpose and function of TCP segment

Window size – number of bytes that can be accepted at one time

Header length – length of TCP segment header

All

Q16

Pick the incorrect statement

- hostname : is used to change the device name
- line vty 0 4 : is used to configure the console port
- py running-config startup-config : is used to copy the current configuration to startup configuration.
- All Correct

2

Q17

Calculate the wildcard mask for the following subnet mask:

255.255.255.0

- 255.255.255.255
- 255.255.255.0
- 0.0.0.0
- 0.0.0.255

2

Q18	<p>There are three options for inter-VLAN routing:</p> <ul style="list-style-type: none"> <input type="radio"/> Legacy inter-VLAN routing <input type="radio"/> Router-on-a-Stick <input type="radio"/> Layer 3 switching using SVIs <input type="radio"/> All 	2
Q19	<p>What is floating static route.</p> <ul style="list-style-type: none"> <input type="radio"/> Is a back route <input type="radio"/> Configured with high AD <input type="radio"/> Used when primary route is unavailable. <input type="radio"/> ALL 	2
Q20	<p>Which of the following is fastest packet processing and forwarding method?</p> <ul style="list-style-type: none"> <input type="radio"/> Process Switching <input type="radio"/> Fast Switching <input type="radio"/> Cisco Express Forwarding <input type="radio"/> None 	2
Q21	<p>Which of the following is NOT a function of presentation layer?</p> <ul style="list-style-type: none"> <input type="radio"/> Data Encryption <input type="radio"/> Data encapsulation <input type="radio"/> Data Compression <input type="radio"/> Data Representation 	2
Q22	<p>For a Class C network if we want to create 4 Subnet.</p> <ul style="list-style-type: none"> <input type="radio"/> 2 bits will be taken from host part and the new subnet mask is /26 <input type="radio"/> 4 bits will be taken from host part and the new subnet mask is /26 <input type="radio"/> 2 bits will be taken from host part and the new subnet mask is /4 <input type="radio"/> 2 bits will be taken from host part and the new subnet mask is /28 	2

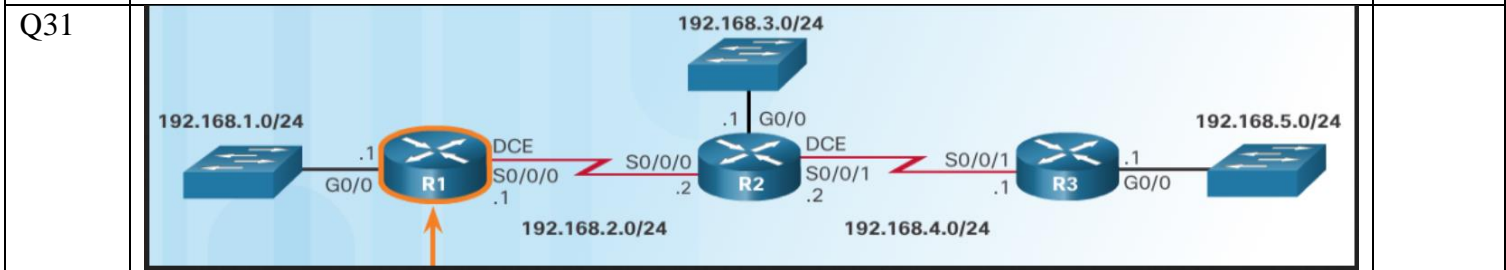
Q23	<p>Which of the following Sub netting technique is more IP addresses preserving.</p> <ul style="list-style-type: none"> <input type="radio"/> FLSM <input type="radio"/> VLSM <input type="radio"/> Both <input type="radio"/> None 	2
Q24	<p>Which of the following is a switch form factor?</p> <ul style="list-style-type: none"> <input type="radio"/> Fixed Configuration <input type="radio"/> Modular Configuration <input type="radio"/> Stackable Configuration <input type="radio"/> All 	2
Q25	<p>Pick the correct statement</p> <ul style="list-style-type: none"> <input type="radio"/> A store and forward switch receives the entire frame and calculate the checksum <input type="radio"/> A cut through switch forwards the frame after reading the mac address <input type="radio"/> Store and forward switches are slower <input type="radio"/> All 	2
Q26	<p>Which of the following is not a type of VLAN</p> <ul style="list-style-type: none"> <input type="radio"/> Default VLAN <input type="radio"/> Data VLAN <input type="radio"/> Native VLAN <input type="radio"/> Network VLAN 	2
Q27	<p>Which of the following command will be used to configuring SSH on a switch?</p> <ul style="list-style-type: none"> <input type="radio"/> configure the IP domain name. <input type="radio"/> Configure user authentication <input type="radio"/> Enable SSH <input type="radio"/> ALL 	2
Q28	<p>The size of the IPv4, IPv6 and MAC address are</p> <ul style="list-style-type: none"> <input type="radio"/> 32,64,48 bits <input type="radio"/> 32,64,128 bits 	2

	<input type="radio"/> 128,64,32 bits <input type="radio"/> 32,128,48 bits	
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Q29	<p>Match the following:</p> <p>Default VLAN All switch ports are assigned to this VLAN after booth up</p> <p>Management VLAN Carries untagged traffic.</p> <p>Data VLAN configured to carry user generated traffic</p> <p>Native VLAN An IP address and subnet mask is assigned to this VLAN, allowing the remote access of the switch</p>	2
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Q30	<p>Which of the following is correct about RIP?</p> <p><input type="radio"/> Routing information protocol</p> <p><input type="radio"/> RIPv1 and RIPv2</p> <p><input type="radio"/> RIP v2 is classless</p> <p><input type="radio"/> All</p>	2
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SECTION B



Q31	<ol style="list-style-type: none"> 1). Assume there are 3 PC connected to each network 192.168.1.0/24, 192.168.3.0/24, 192.168.5.0/24, assign IP address and default gateway to each PC. 2). Configure router interface with the assigned IP addresses. 3). Configure Rip protocol. 	15
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<p>Q32</p>	<table border="1"> <thead> <tr> <th>Destination</th> <th>Sub net mask</th> <th>Interface</th> </tr> </thead> <tbody> <tr> <td>128.75.43.0</td> <td>255.255.255.0</td> <td>Eth0</td> </tr> <tr> <td>128.75.43.0</td> <td>255.255.255.128</td> <td>Eth1</td> </tr> <tr> <td>192.12.17.5</td> <td>255.255.255.255</td> <td>Eth3</td> </tr> <tr> <td>default</td> <td></td> <td>Eth2</td> </tr> </tbody> </table>	Destination	Sub net mask	Interface	128.75.43.0	255.255.255.0	Eth0	128.75.43.0	255.255.255.128	Eth1	192.12.17.5	255.255.255.255	Eth3	default		Eth2	<p>10</p>
Destination	Sub net mask	Interface															
128.75.43.0	255.255.255.0	Eth0															
128.75.43.0	255.255.255.128	Eth1															
192.12.17.5	255.255.255.255	Eth3															
default		Eth2															
<p>Q33</p>	<p>Follow the routing table and find out the exit interface if</p> <p>a). A packet with the destination 128.75.43.16 arrives</p> <p>b). A packet with destination 192.12.17.10 arrives</p> <p>c) A packet with destination 12.10.5.4 arrives.</p>	<p>10</p>															
<p>Q34</p>	<p>Differentiate between Static NAT, Dynamic NAT and PAT.</p>	<p>5</p>															