

**UNIVERSIDAD DE DAGUPAN**

*SCHOOL OF INFORMATION TECHNOLOGY EDUCATION*

ITP1/CSP19 | ROUTING AND SWITCHING ESSENTAILS

PRELIM EXAM | SET A

**Instructions:**  Name : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Turn off your cell phone/s. Use of CP is not Year, Course & blk : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Allowed during exam. Subject : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Write ALL YOUR ANSWERS LEGIBLY. Date : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
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* READ and FOLLOW the DIRECTIONS carefully!

**PART-I-FILL IN THE BLANK:**

*Direction: Fill in the missing word/s of the following. (USE UPPERCASE ONLY)*

**University Philosophy, Vision, Mission and Objectives.**

**Philosophy**

The institution believes that through education, man’s God-given gifts are discovered and developed for his personal (1) \_\_\_\_\_\_\_\_\_\_\_\_\_ and community uplift.

**Vision**

It envisions to create a community responsive to the (2) \_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the changing world.

**Mission**

It is tasked to prepare the (3) \_\_\_\_\_\_\_\_\_\_ with the best that education can offer in a manner that is consistent with the needs of society.

**Objectives**

1. To encourage critical thinking;
2. To provide competent human resources in various fields;
3. To uphold discipline, justice and equality;
4. To improve man’s equality of life through research and community services

**EOMS Policy**

The Universidad de Dagupan shall be known as an educational institution that discovers and develops God-given gifts to help achieve man’s personal fulfillment and community uplift.

We shall continue to maintain our innovation efforts with the potential to create solutions and to be an invaluable national treasure. We shall commit to providing satisfactory service delivery and comply with applicable requirements in view of the educational, scientific, and technical developments.

We shall (4) \_\_\_\_\_\_\_\_\_\_\_\_\_ improve our instruction, research, extension, and administrative operations to provide excellent education to individuals and communities responsive to the challenges of the changing world.

**PART II : IDENTIFICATION**

*Direction: Identify and choice the best answer/s that fits the question. (USE UPPERCASE ONLY)*

\_\_\_\_\_5. What is the name of the program stored in ROM that a Cisco switch loads first after being powered on to check the CPU subsystem?

\_\_\_\_\_6. After POST, what is the name of the small program stored in ROM that is loaded next?

\_\_\_\_\_7. What is the name of the command used to set the BOOT environment variable on a Cisco switch?

\_\_\_\_\_8. What is the purpose of the System LED (SYST) on a switch?

\_\_\_\_\_ 9. What is the name of the command-line prompt that appears in the terminal emulation software when a switch is in boot loader mode?

\_\_\_\_\_10. To prepare a switch for remote management access, what must be configured with an IP address and a subnet mask?

\_\_\_\_\_11. What is the default VLAN for management on a switch?

\_\_\_\_\_12. Which type of communication increases bandwidth efficiency by allowing both ends of a connection to transmit and receive data simultaneously?

\_\_\_\_\_13. What is the default setting for both duplex and speed for switch ports on Cisco Catalyst 2960 and 3560 switches?

\_\_\_\_\_14. What is the name of the feature that allows a switch interface to automatically detect the required cable type and configure the connection appropriately?

\_\_\_\_\_15. Which command is used to display the current running configuration of a switch?

\_\_\_\_\_16. Which older, unsecure protocol uses plaintext transmission for login authentication and data?

\_\_\_\_\_17. What secure protocol should replace Telnet for management connections and uses TCP port 22?

\_\_\_\_\_18. A switch builds this type of table, also known as a Content Addressable Memory (CAM) table, by recording the source MAC address and the port it was received on.

\_\_\_\_\_19. What is the name of the switching method that receives the entire frame, checks it for errors, and buffers it before forwarding?

\_\_\_\_\_20. What is the name of the switching method that forwards a frame immediately after determining the destination MAC address and egress port?

\_\_\_\_\_21. In a half-duplex communication environment, what are the areas where packets can collide with each other?

\_\_\_\_\_22. This type of domain extends across all Layer 1 and Layer 2 devices on a LAN and is only broken by a Layer 3 device like a router.

\_\_\_\_\_23. What type of packets are discarded because they are smaller than the minimum packet size for the medium, such as an Ethernet packet less than 64 bytes?

\_\_\_\_\_24. What are Ethernet frames that are larger than the maximum allowed size called?

\_\_\_\_\_25. What type of errors are generated when the calculated checksum is not the same as the checksum received, often indicating a media or cable issue?

\_\_\_\_\_26. What is the name of the VLAN used for SSH/Telnet VTY traffic, which should be kept separate from end-user traffic?

\_\_\_\_\_27. What type of VLAN is required for assured bandwidth and high QoS priority?

\_\_\_\_\_28. What is a point-to-point link between two network devices that allows more than one VLAN to pass through?

\_\_\_\_\_29. Which protocol is a Cisco proprietary protocol that manages trunk negotiations?

\_\_\_\_\_30. What is the name of the 12-bit VLAN identifier in the IEEE 802.1Q tag field that can support up to 4096 VLANs?

\_\_\_\_\_31. What is the default VLAN on a Cisco switch that cannot be deleted or renamed?

\_\_\_\_\_32. What is the name of the VLAN used for trunk links where frames are typically not tagged?

\_\_\_\_\_33. What is the name of the file in flash memory where normal range VLAN configurations are stored?

\_\_\_\_\_34. In the show vlan brief command output, what status is listed for an active VLAN?

\_\_\_\_\_35. Without a Layer 3 device, can devices in different VLANs communicate with each other?

\_\_\_\_\_36. The IEEE 802.1Q header is how many bytes?

\_\_\_\_\_37. What command is used in global configuration mode to create a VLAN?

\_\_\_\_\_38. What command is used to delete a specific VLAN?

\_\_\_\_\_39. What is the process of forwarding network traffic from one VLAN to another?

\_\_\_\_\_40. What is the name of the legacy inter-VLAN routing solution that does not scale well because it requires a physical router interface for each VLAN?

\_\_\_\_\_41. Which inter-VLAN routing method is an acceptable solution for a small to medium-sized network and uses only one physical Ethernet interface to route traffic between multiple VLANs?

\_\_\_\_\_42. On a router-on-a-stick configuration, what are the software-based virtual interfaces called that are configured with an IP address and VLAN assignment?

\_\_\_\_\_43. What is the modern and most scalable method of performing inter-VLAN routing for medium to large organizations?

\_\_\_\_\_44. An SVI is a virtual interface configured on which type of switch?

\_\_\_\_\_45. What is another name for a Layer 3 switch?

\_\_\_\_\_46. What is the most common cause of problems with a router-on-a-stick configuration?

\_\_\_\_\_47. What type of port is created on a Layer 3 switch by disabling the switchport feature on a Layer 2 port?

\_\_\_\_\_48. What is the name of the legacy inter-VLAN routing solution that does not scale well because it requires a physical router interface for each VLAN?

\_\_\_\_\_49. Which inter-VLAN routing method is an acceptable solution for a small to medium-sized network and uses only one physical Ethernet interface to route traffic between multiple VLANs?

\_\_\_\_\_50. What is the modern and most scalable method of performing inter-VLAN routing for medium to large organizations?

**CHOICES:**

1. "**k9**"
2. **4 bytes**
3. **A Layer 3 switch**
4. **A Layer 3 switch using switched virtual interfaces (SVIs)**
5. **A Layer 3 switch using switched virtual interfaces (SVIs)**
6. **A misconfigured trunk port**
7. **active**
8. **Auto**
9. **Automatic medium-dependent interface crossover (auto-MDIX)**
10. **Boot loader software**
11. **boot system**
12. **Broadcast domain**
13. **Collision domains**
14. **CRC errors**
15. **Cut-through switching**
16. **Data VLAN**
17. **Dynamic Trunking Protocol (DTP)**
18. **Egress**
19. **Full-duplex communication. (O)**
20. **Giants**
21. **Ingress**
22. **Inter-VLAN routing**
23. **Legacy inter-VLAN routing**
24. **Legacy inter-VLAN routing**
25. **Loopback interface**
26. **MAC address table**
27. **Management VLAN**
28. **Multilayer switch**
29. **Native VLAN**
30. **No**
31. **no vlan vlan-id**
32. **Power-on self-test (POST)**
33. **Router-on-a-stick**
34. **Routed port**
35. **Runts**
36. **Secure Shell (SSH)**
37. **show running-config**
38. **Store-and-forward switching**
39. **Subinterfaces**
40. **switch: prompt**
41. **Telnet**
42. **The switch virtual interface (SVI)**
43. **To show whether the system is receiving power and functioning properly.**
44. **Trunk**
45. **VLAN**
46. **VLAN 1**
47. **VLAN ID (VID)**
48. **vlan vlan-id**
49. **vlan.dat**
50. **Voice VLAN**

**ANSWERS**

1. Power-on self-test (POST).

Full-duplex communication. (O)

1. switch: prompt.
2. Telnet.
3. Boot loader software.
4. VLAN 1.
5. Loopback interface.
6. Auto.
7. show running-config.
8. Secure Shell (SSH).
9. Automatic medium-dependent interface crossover (auto-MDIX).
10. To show whether the system is receiving power and functioning properly.
11. The switch virtual interface (SVI).
12. "k9".
13. boot system.

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ITP1/CSP19 | ROUTING AND SWITCHING ESSENTAILS

MIDTERM EXAM | SET A

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**PART I : MULTIPLE CHOICE**

*Direction: Identify and choice the best answer/s that fits the question. (USE UPPERCASE ONLY)*

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PRE-FINAL EXAM | SET A

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**PART I : MULTIPLE CHOICE**

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FINAL EXAM | SET A

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