

TNE10006/TNE60006 Final Skills Exam (Paper Sample A)

Name: _____ Student ID: _____

Sem/Year: Semester 1, 2025

Duration: 1 hour (No reading time)

Questions about the exam may only be asked during the first 10 minutes of the exam, no questions will be answered following this time.

The routers and switches have been checked to ensure that they have no pre-existing configuration and a valid IOS installed on the flash. It is your responsibility to ensure you do not erase the IOS operating system.

The routers and switches have been physically interconnected to match the network topology for this exam. It is your responsibility to validate that the devices are correctly interconnected.

All devices have been tested prior to the exam so an error is unlikely. However, If you believe there is a hardware or cabling error with your devices, you must inform the Exam Supervisor within the first 30 minutes of the exam. You will be required to demonstrate how you determined there is a hardware or cabling error. If an error exists, you will be granted a reasonable amount of additional time. If there isn't an error, you will not be granted additional time.

NOTE: You must include your identification details on the space provided at the top of this page. You must not take this exam paper outside the exam room. Not identifying your exam paper or taking it outside the room will result in a FAIL.

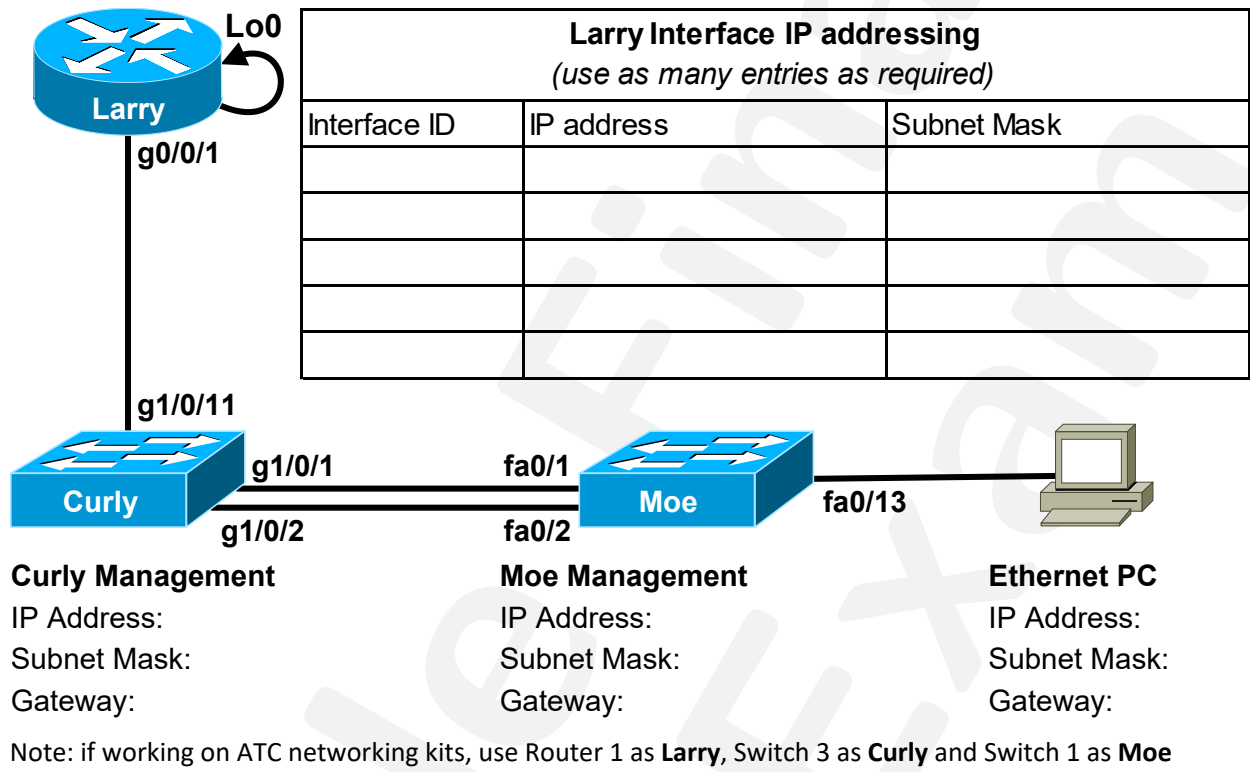
NOTE: Do not assign console or enable passwords to your switches or router unless explicitly required on the exam paper. Configuring a console or enable password on one or more of your devices will result in a FAIL.

Part A – Scenario

Your corporation has recently grown such that you have decided to create separate VLANs to manage the users. You have also deployed a distribution layer switch (**Curly**) in preparation for a larger network in the near future. You have opted for a redundant link between your switches for service guarantee and a **router-on-a-stick** solution to cut costs.

Part B – Network Diagram

The following diagram illustrates the network topology for this exam. You may wish to record IP addresses on the topology diagram.



Part C – VLAN and IP Addressing Information

This section contains VLAN information, IP subnet information and device IP address information.

VLAN ID	VLAN Name	Allocated IP Subnet
5	Three	83.174.16.0/25
45	Stooges	83.174.0.0/20
278	Crazy	83.174.16.128/27
451	Management	83.174.16.160/29

Router Addresses

All IP addresses allocated to **Larry** sub-interfaces **must** be the **last** usable address in the allocated IP subnet. The **Loopback0** interface **must** be assigned the IP address 93.216.87.1/29.

Switch Management Addresses

The management IP address on **Curly** must be the **second-last** usable IP address in the **Management** subnet, and the **third-last** usable address on **Moe**. The management address **must** be configured on the **Management** VLAN.

Part D – Configuration Requirements

In order to pass this exam, all of the below requirements must be met exactly.

- Configure a **hostname** on all devices
- Configure a **message of the day** on all devices (include your student ID and surname in the MOTD)
- Configure **SSH** access on all devices for administrative privileges using username **sample** and password **exam**
- Configure **Larry** as a **router-on-a-stick** to route between all VLANs
- All sub-interfaces on **Larry** must be configured with the **last** usable address in the allocated subnet
- Configure **Loopback0** on **Larry** with the specified IP address and subnet mask
- All interfaces and sub-interfaces on **Larry** must be configured with a **description**
- **Moe** and **Curly** must be configured with all VLANs
- **Moe** and **Curly** must be configured with the specified **management IP** settings
- The links interconnecting **Moe** and **Curly** must be bundled into an **Etherchannel**
- **Moe** switchports **f0/13-16** must be enabled as access ports, allocated to the **Three** VLAN and with **port-security** mac-address mode **sticky**
- **Moe** switchports **f0/17-20** must be enabled as access ports, allocated to the **Stooges** VLAN and with **port-security** violation mode **protect**
- **Moe** switchports **f0/21-24** must be enabled as access ports, allocated to the **Crazy** VLAN and with **port-security** allowing a **maximum** of four mac-addresses
- **Moe** switchports **f0/3-12** and **g0/1-2** must be disabled
- All **unused ports** on **Curly** (including g0/0 and g1/1/1-4) must be disabled
- **Moe** must be configured to become the **STP root** bridge for the **Stooges** and the **Crazy** VLANs
- **Curly** must be configured to become the **STP root** bridge for the **Three** and the **Management** VLANs

Part E – Connectivity Testing

You are advised to test network connectivity by **pinging** all allocated IP addresses from all devices, including the Ethernet PC. You may also choose to configure the VAN PC (connected to port f0/24 on Moe) as a test PC on the Crazy VLAN, however, this is **NOT** required. The PCs can be configured with any valid IP address within the subnet allocated to their corresponding VLAN.

NOTE:

Successful ping tests are **NOT** a guarantee that you will pass the exam. You are advised to test all other aspects of your network configuration to validate that it meets the requirements listed in Part D.

End of Exam