Part 1:

Part 1: Installing the network and setting up the network infrastructure: 1. Using virtualization software, install 2 virtual machines. Use Server 2019 (Desktop - GUI) or Server 2022 (Standard or Datacentre - Desktop Experience). One VM will act as the Domain Controller Server and the other VM will act as a Web server.

2. Rename the server using the name DC followed by your student number as the server name. For example, if my student number is 2022123, I would name my server DC2022123 Rename this computer Windows System Properties. Rename the second server using the name Web followed by your student number as the server’s name. For example, if my student number is 2022123, I would name my server Web-2022123. Use Windows PowerShell to rename this computer.

Graphical user interface, text, application, email

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3. Assign the server static IP addressing using the following configuration.

**Server address:** 172.16.0.100/16 Note: The /16 indicates the subnet mask. Use 172.16.0.1 as the default gateway, for the preferred DNS Server address use 172.16.0.100 and for or the alternate DNS Server use 8.8.8.8

Graphical user interface, application, Word

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**Web address:** 172.16.0.200/16 Note: The /16 indicates the subnet mask. Use 172.16.0.1 as the default gateway, for the preferred DNS Server address use 172.16.0.100 and for or the alternate DNS Server use 8.8.8.8

Graphical user interface, application, Word

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4. Test and demonstrate connectivity between the two devices by using the PING command.

A screenshot of a computer

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5. Convert the first server (DC) into a Domain Controller. Notice that the DNS service is installed during the DC installation procedure (in other words your server will act as its own DNS server and the DNS service will get installed while Active Directory is installed). You will create an Active Directory domain following these specifications: Use the name Domain-xyz.abc where xyz are the last 3 numbers of your student number (For example, if your student number is 2020-123 you will use the name Domain-123.abc).

Graphical user interface, text

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Graphical user interface, website

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6. After the Domain Controller has been installed, join the Web computer to the Domain.

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Part 2: Setting up and testing a simple web site: 1. Install the Windows IIS Web hosting software onto the Server 2 computer. Do this using one of more PowerShell commands.

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Graphical user interface, text

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2. Create a simple one-page Website for a company called DigiTech.abc (you do not need a fancy web page but include at least one picture along with your name and your student number).

3. Using Internet Information Server (IIS) and the web page you have created, set up a Web site on the Web computer (not the Domain Controller). Use a web browser to demonstrate that the Web site is working.

Graphical user interface, application

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