# End of Unit Quiz – Unit 1.5 Network topologies, protocols and layers

1. Draw the links between four workstations using a full mesh network topology.

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1. You are setting up a new network using a Star network topology. Draw the Star network topology using two workstations, a server and a switch.

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1. What are **two** reasons why you may have chosen to use a Star network topology?

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1. What are **two** disadvantages of using a Star network topology instead of a Mesh network toplogy?

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1. What is the definition of ‘protocol’?

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1. What does the term **POP** stand for?

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1. What is the protocol that is used to transmit data between different networks?

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1. What is the difference between **HTTP** and **HTTPS**?

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1. Data is transmitted across a network in packets. What are **three** items that each data packet will contain?

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1. Draw three lines to match the protocol to the characteristic.

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| HTTP |  | Used to retrieve emails |
| IMAP |  | Used by web browsers to communicate with web servers. |
| SMTP |  | Used to send emails. |

1. Protocols are divided into layers. Why are layers used?

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1. Packet switching is used to send data on the internet. How does packet switching work?

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1. What is the difference between an IP address and a MAC address?

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1. What difference us a user likely to experience when upgrading from a b series router to an n series router?

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1. Explain the reason behind your answer to question 14.

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1. Devices may have either a static or dynamic IP address. What is the difference between a static and dynamic IP address?

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1. Convert the following 6 byte number into hexadecimal.

10100110:11000001:10010000:00010010:10011110:00110110

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1. List the following steps which detail the encryption process in the correct order:

* Client requests HTTPS session
* Encrypted session key is sent to the server
* The session key is decrypted with the private key
* Session encrypted with session key
* Client creates session key
* Certificate sent to client from the server

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1. What does the acronym **FTP** stand for?

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* 1. What does the acronym **POP3** stand for?

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* 1. What is the purpose of **POP3**?

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1. Fill in the table below with either true or false.

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| **Statement** | **True / False** |
| A peer-to-peer network has one central controlling computer. |  |
| Peer-to-peer networks are easier to set up than client-server networks. |  |
| Peer-to-peer networks allow individual devices to share files between each other. |  |
| Peer-to-peer networks are commonly used in large organisations. |  |
| It is easier to implement security procedures throughout a client server network than a peer to peer network. |  |