Level 3 Networking Principles (7540-031)

Assignment guide for Candidates

Assignment A

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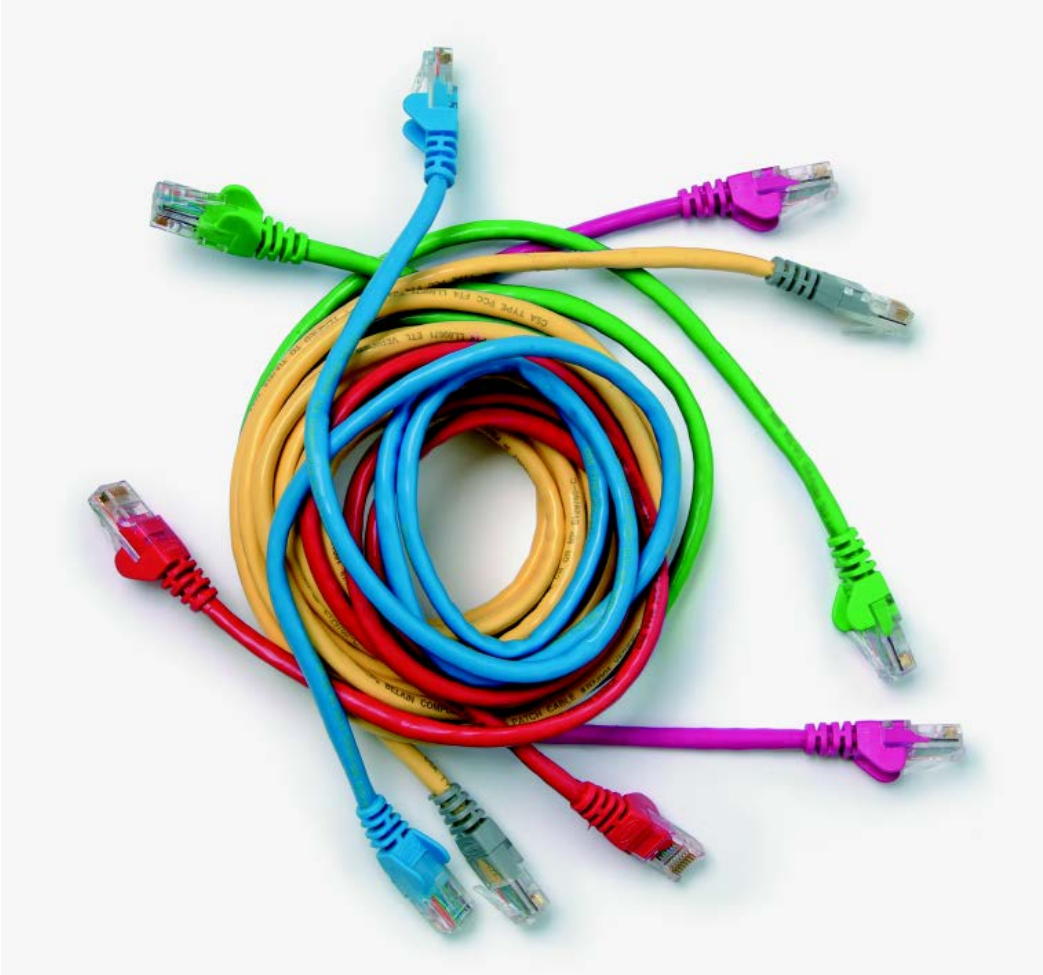

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City & Guilds
1 Giltspur Street
London EC1A 9DD
T +44 (0)844 543 0000 (Centres)
T +44 (0)844 543 0033 (Learners)
F +44 (0)20 7294 2413
www.cityandguilds.com
learnersupport@cityandguilds.com

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Assignment A
Introduction – Information for Candidates

About this document
This assignment comprises all of the assessment for Level 3 Networking Principles (7540-031).

Health and safety
You are asked to consider the importance of safe working practices at all times.

You are responsible for maintaining the safety of others as well as your own. Anyone behaving in an unsafe fashion will be stopped and a suitable warning given. You will **not** be allowed to continue with an assignment if you compromise any of the Health and Safety requirements. This may seem rather strict but, apart from the potentially unpleasant consequences, you must acquire the habits required for the workplace.

Time allowance
The recommended time allowance for this assignment is **three and a half hours**.

Level 3 Networking Principles (7540-031)

Candidate Instructions

Time allowance: three and a half hours

Assignment set up:

This assignment is made up of **three** tasks:

- Task A
- Task B
- Task C

Scenario

Z.B.Data Comms is a company specialising in the design, construction and configuration of networks for businesses and industry.
Having successfully completed your apprenticeship you are to be interviewed for the post of Network Engineer.
As part of the pre-interview process you have been asked to demonstrate you current knowledge by completing a number of tasks.

Please use the Answer Sheet provided to complete all Tasks.

Task A

1 Explain the difference between logical and physical network topologies.

2 Describe how **each** of the following physical network topologies transmits data and specify appropriate cabling and connectors for each.

- Bus
- Star
- Ring
- Mesh
- Hybrid or Tree

3 Describe data communication systems hardware and software components that are typically used in constructing and configuring a LAN.
Include in your description a minimum of **seven** hardware and **four** software components.

4 Identify **two** wiring standards and explain the difference between them.

5 Identify **three** wireless standards.

Task B

1 Describe the function of **each** layer of the OSI model and explain how the layers relate to each other, including encapsulation and framing.

2 For **each** layer of the OSI model, describe the key features, protocols and standards.

Task C

1 Describe the functions and key features of the **four** layers of the Internet Protocol (TCP/IP) model.

2 Describe the protocols of **each** TCP/IP layer.

3 Explain how the TCP/IP model relates to the OSI model.

When you have finished working:

- Sign each document above your name and label all removable storage media with your name.
- Hand all paperwork and removable storage media to your assessor.

If the assignment is taken over more than one period, all paperwork and removable media must be returned to the test supervisor at the end of each sitting.

End of assignment

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F +44 (0)20 7294 2413
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