Level 2 Systems architecture (7540-013)

Assignment guide for Candidates

Assignment A

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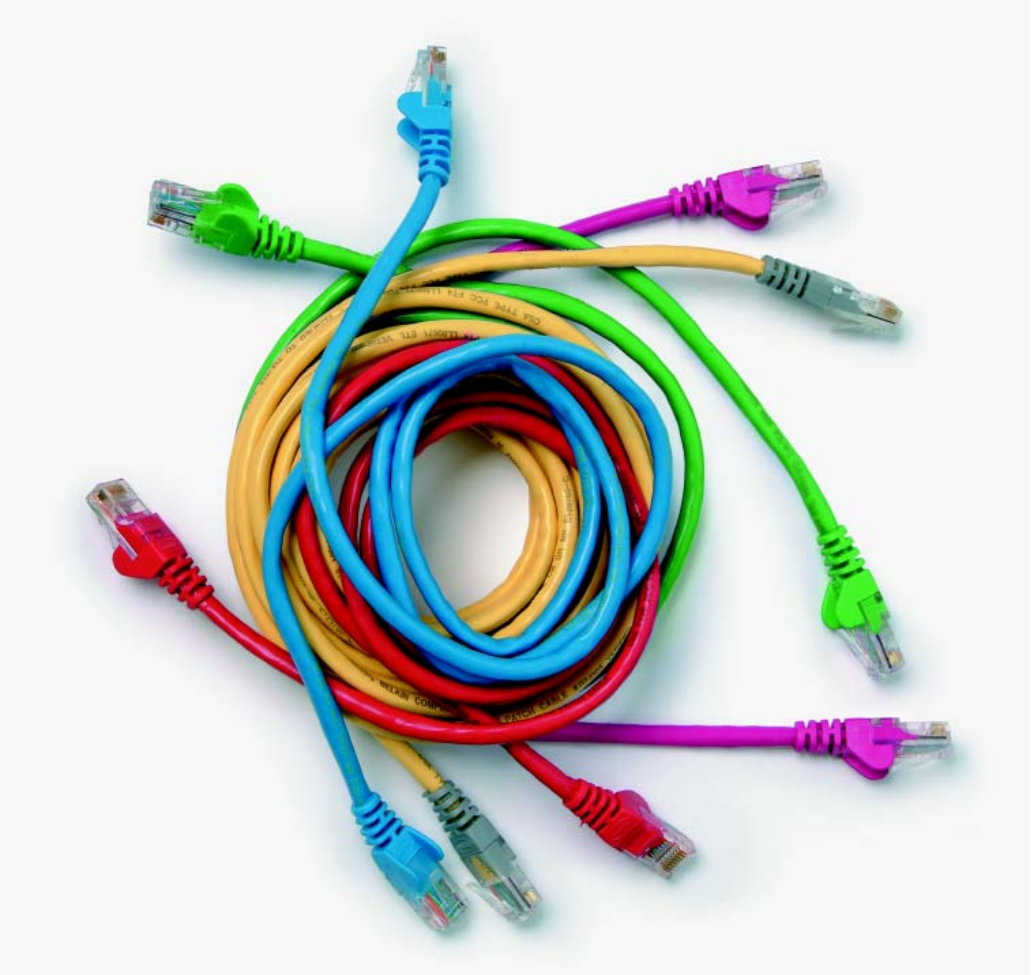

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Assignment A
Introduction – Information for Candidates

About this document
This assignment comprises all of the assessment for Level 2 Systems architecture (7540-013).

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 **2 hours**.

Level 2 Systems architecture (7540-013)
Candidate instructions

Candidates are advised to read **all instructions** carefully before starting work and to check with your assessor, if necessary, to ensure that you have fully understood what is required.

Time allowance: 2 hours

This assignment is made up of **three** tasks where you will provide information for a leaflet.

Scenario

You are employed by ABS Systems as an IT Technician who is recognised as having excellent technical knowledge. Your line manager has asked you to produce the information for a leaflet explaining common aspects of computing that will be given to future new employees of the company. It is important that you explain the technical terms in simple, everyday language where possible.

This leaflet will contain diagrams which may be hand drawn or produced on a computer.

Task A

1 Explain how the following number systems store information in a computer:
   a binary
   b hexadecimal
   c ASCII.

2 Explain the role of input devices, output devices, storage devices and peripheral devices, giving **two** examples in each case.

3 Draw a diagram explaining the Fetch Execute Cycle. (**Please note that this can be hand drawn or word processed**).

4 Draw a simple block diagram of the Central Processing Unit (CPU) explaining the function of each component. (**Please note that this can be hand drawn or word processed**).

Task B

1 **Take screen prints of the following:**
For your evidence created in Task A1, copy and paste it into your text editor. Then:
- save the text edited work as *yourname* using your text editing package
- create a new folder in your home directory called *printing* and copy *yourname.txt* to this folder
- using the command line interface rename *yourname.txt todaysdate.txt*.

2 Briefly describe **two** of the security features listed below which are typically built into a network operating system:
- passwords
- access rights
- permissions
- firewalls.

3 Briefly explain the processes involved in an operating system as listed below:
- memory management techniques
- file management (directory structure, file structure, file access control, storage methods)
- storage protection methods
- deadlock.

4 Within the operating system you are using, identify and briefly explain how to end a program or process that has deadlocked/stopped working.

Task C

1 Briefly explain what is meant by the term *distributed operating system*.

2 Identify and explain **three** main functions of a distributed operating system.

3 Briefly explain the purpose of the OSI seven layer model in relation to networking and communication of data between entities.

Note

- At the conclusion of this assignment, hand all paperwork and removable media to the test supervisor.
- Ensure that your name is on the removable media and all documentation.
- If the assignment is taken over more than one period, all removable media and paperwork must be returned to the test supervisor at the end of each sitting.

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