e-Quals Unit Syllabus

Level 1 IT Principles 1

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Unit 001 IT Principles 1

Syllabus Overview

Rationale

The aim of this unit is to provide candidates with a primary level of skills and knowledge to competently *perform a variety of system related tasks* using Information and Communications Technologies (ICT). Candidates develop an understanding of the basics of the operation of computers and the operating system in everyday usage and the ability to work in a supervised role following clear instructions in a competent manner.

Learning outcomes

There are **six** outcomes to this unit. The candidate will be able to:

- Describe and use hardware
- Use the operating environment
- Identify, describe and use systems applications and tools
- Use file management for disks in directories/folders
- Describe information networks
- Identify health and safety issues and good practice

Guided learning hours

It is recommended that 30 hours should be allocated for this unit. This may be on a full time or part time basis.

Connections with other qualifications

This unit contributes towards the knowledge and understanding required for the following qualifications:

IT Users N/SVQ (iTQ) Level 1

Outcome	Unit
1, 2	101 - Make selective use of IT 1
1, 2, 3	102 - Operate a computer 1
1	103 - IT troubleshooting for users 1
1, 2	104 - IT maintenance for users 1
2, 3, 4	115 - Evaluate the impact of IT 1
1, 2, 3, 4,5	117 - Use IT systems 1

Key Skills

This unit contributes towards the Key Skills in the following areas:

ICT Skills for Life

Using ICT systems	Level 1 – 1.1, 1.2, 1.3, 2.1, 2.3, 2.4 Level 2 – 1.3, 2.1
Finding and exchanging information	Level 1 – 5.1
Developing and presenting information	Level 1 – 7.1

Key Skills links	
Application of number	
Communication	
IT	IT 102
Working with others	
Problem solving	PS 1.1
Improving own learning	

Assessment and grading

Assessment will be by means of a **set assignment** covering practical activities and a **multiple choice test** covering underpinning knowledge.

Unit 001 IT Principles 1

Outcome 1 Describe and use hardware

Practical skills

The candidate will be able to:

1 identify the hardware needed for using a computer eg mouse/pointer device, keyboard, VDUs (monitors, including touchscreen), scanner/bar code reader, optical disk drives, removable/portable media. Reconnect the component parts of a stand alone PC eg mouse, monitor, keyboard, base unit and the network connector (if available)

2 identify the consumables and media needed for use eg printer paper, cartridges, toner, removable/portable media, optical drive media

3 refill a printer with paper when needed

4 run a printer self-test

5 identify and report problems.

Underpinning knowledge

The candidate will be able to:

1 identify the main types of computers and their uses eg supercomputer, mainframe, mini, micro, work station, laptop, notepad, pocket and mobile phones, connections to mainframes eg ATM (Automatic Teller Machine) and their typical speeds

2 identify the main components of a computer

3 identify and describe input devices

4 identify and describe output devices

5 identify different types of printers eg laser, colour laser, inkjet, dye sublimation, dot matrix

6 identify different sizes of paper, envelopes and labels

7 identify a modem, a router and a network card

8 identify the purpose of volatile (RAM) and non-volatile (secondary storage) memory.

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Outcome 2 Use the operating environment

Practical skills

The candidate will be able to:

1 identify the computer's basic system information eg operating system and version, RAM, processor and processor speed

2 change the computer's desktop settings and desktop display settings to suit individual needs

3 use different parts of the desktop window, eg title bar, toolbar, menu bar, status bar, scroll bar

4 carry out the following tasks using desktop windows

- a maximise, minimise and resize (shorter, taller, wider or narrower) a window
- b restore a window from the task bar
- c move windows and icons around the desktop
- d use keyboard shortcuts or mouse/pointer device to switch between active and inactive windows
- e switch between programs.

Underpinning knowledge

The candidate will be able to:

1 identify the four stages of the Processing Cycle – (input, process, output and storage)

2 identify basic desktop icons and shortcuts.

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Outcome 3 Identify, describe and use systems applications and tools

Practical skills

The candidate will be able to:

1 power up and access the operating environment

2 select (and run if allowed) system software and tools eg file manager/explorer, disk checker, defragmentation, virus checker

3 set a system application to run automatically (task schedule)

4 use help files to find and print information about system applications

5 respond to error messages and screen prompts

6 use print preview, print, cancel print

7 exit a system application and return to the operating system

8 exit the computer system correctly and switch power off.

Underpinning knowledge

The candidate will be able to:

1 identify types of system applications eg restore, disk checker, defrag, virus checker, firewall, back-up, adware and spyware detectors

2 identify the differences between in built systems applications and vendor applications

3 identify the purpose of a virus checker and the need for updates to the virus signature database

4 identify an application which would carry out the following:

- a prepare letters and memos
- b prepare and run slide shows
- c maintain records of customers eg database or Personal Information Manager (PIM)
- d working with numbers and money
- e working with images
- f working with the world wide web.

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Outcome 4 Use file management for disks in directories/folders

Practical skills

The candidate will be able to:

1 transfer files to a hard disk or removable/portable media or optical media

2 create, delete and rename directories/folders, subdirectories/subfolders and files

3 search for named files

4 copy files between directories/folders (copy and paste or 'ctrl' drag and drop)

5 move files between directories/folders and disks (cut and paste or drag and drop).

Underpinning knowledge

The candidate will be able to:

1 identify a basic directory/folder structure

2 identify the difference between directories/folders and files

3 identify ways to prevent the loss of data, eg write protection, virus checking, files for safety

4 identify the need for making backup copies

5 identify data storage media, eg optical disk, removable/portable storage devices eg USB stick and their nominal capacities

6 identify the importance of protecting data, confidentiality and copyright

7 identify the importance of careful handling and data storage for each of the following

- a magnetic disks
- b optical disks

8 identify measurements of data storage

- a bit
- b byte
- c kilobyte
- d megabyte
- e gigabyte
- f terabyte.

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Outcome 5 Describe information networks

Practical skills

The candidate will be able to:

1 log-on to a network

2 display files to which access is allowed

3 select, open and save a file from a remote location to a local directory

4 use a printer attached to a network to print out a file

5 log-off from a network.

Underpinning knowledge

The candidate will be able to:

1 identify the types of network connection eg cable, wireless, infra red and purpose of a network operating system and their use including the standard communication protocol (TCPIP only)

2 identify a network card, a router and a modem card and their use

3 identify the type of connector eg modem/network and connection eg dialup or broadband and their typical speeds.

Unit 001 IT Principles 1

Outcome 6 Identify health and safety issues and good practice

Practical skills

The candidate will be able to:

1 maintain and use a safe working environment and equipment for self and others eg storage of consumables, cabling, clear transit areas

2 use safe working practices at all times eg operating procedures for visual safety, ergonomics for positional safety, lifting & handling for physical safety

3 identify and report any faults or hazards eg equipment, fixtures or fittings.

Underpinning knowledge

The candidate will be able to:

1 identify what creates a good working environment (ergonomics) and good practice
   - a frequent breaks away from the computer
   - b correct positioning of screens/chairs/keyboards/VDUs
   - c suitable lighting and ventilation

2 identify good health and safety precautions
   - a power cables are safely secured
   - b power points are not overloaded
   - c transit routes/areas are clear

3 identify injuries common in a bad working environment due to
   - a poor usage eg Repetitive Strain Injury (RSI)
   - b eye strain
   - c bad posture

4 identify cleaning precautions related to ICT equipment

5 identify what constitutes a hazard and what action should be taken eg active, passive, armed and dormant

Unit record sheet

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Use this form to track your progress through this unit.

Tick the boxes when you have covered each outcome. When they are all ticked, you are ready to be assessed.

Outcome	✓	Date
1 **Describe and use hardware**	☐	
2 **Use the operating environment**	☐	
3 **Identify, describe and use systems applications and tools**	☐	
4 **Use file management for disks in directories/folders**	☐	
5 **Describe information networks**	☐	
6 **Identify health and safety issues and good practice**	☐	

Candidate Signature ..... **Date** .....

City & Guilds Registration Number .....

Quality nominee (if sampled) ..... **Date** .....

Assessor Signature ..... **Date** .....

External Verifier Signature (if sampled) ..... **Date** .....

Centre Name ..... **Centre Number** .....

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