

## Unit 348: Set Up an IT System Level 3

Level: 3

Credit value: 5

Guided learning hours: 40

| Learning Outcomes  | Assessment Criteria   | Examples   |
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| <p>The learner will:</p> <p>1. Select and connect up a personal computer safely with associated hardware and storage media to meet needs</p> | <p>The learner can:</p> <p>1.1 Explain the reasons for choosing different system components and how to avoid any compatibility issues between hardware and software</p> <p>1.2 Explain any health and safety issues associated with setting up an IT system</p> <p>1.3 Explain the characteristics of IT systems that affect performance</p> <p>1.4 Select and connect up the components of an IT system safely, including any peripheral devices and storage media</p> | <p>Compatibility issues: What problems can occur when hardware, software and operating systems are not compatible; why compatibility standards are needed</p> <p>Health and safety issues: Health and safety issues, risks from hardware, electrical connection risks and guidelines, use and disposal of cleaning materials, handling equipment. Risks to self and others from using hardware; health and safety point of contact</p> <p>IT system performance: Processor speed, memory size, storage capacity, network capability; <i>graphics; display adapter</i></p> <p>IT system components: Will vary according to the set up, for example: Personal computer, monitor, keyboard, mouse (or other pointing device)</p> <p>Peripheral devices: Speakers, scanner, joystick; data projector, white board; Plug and play devices; customised setup routines, printer and other device drivers</p> <p>Storage media: Disk, CD/DVD, data/memory stick,</p> |

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|  |   | <p>media card, mobile device, removable hard drive; customised setup routines; <i>backup media</i></p> <p>Reasons for choosing storage media: Performance, capacity, accessibility, portability, security</p>   |
| <p>2. Select and connect IT system to a communication service successfully to meet needs</p> | <p>2.1 Explain the reasons for choosing a communication service</p> <p>2.2 Explain what effect variations in data transmission speed may have</p> <p>2.3 Select and connect communication hardware safely to an IT system</p> <p>2.4 Select and connect to a communication service from an IT system</p> <p>2.5 Explain the factors which influence choice of Internet Service Provider</p>   | <p>Communication hardware: Router, modem, mobile data device, wireless router; <i>cables, power supply; USB. parallel, serial connections</i></p> <p>Communication service: Broadband, dial up, wireless, network, mobile device, <i>ISP, IP configuration</i></p> <p>Data transmission speed: Which combinations of hardware and software offer very fast or slower data transmission speeds; download capacity; <i>how much speeds in transmitting, receiving and sending data may vary</i></p>   |
| <p>3. Install and configure operating system and application software ready for use</p>      | <p>3.1 Configure the user interface to meet needs</p> <p>3.2 Explain what security precautions need to be addressed for the system to be used securely online by several users</p> <p>3.3 Install, set up and configure virus protection and other security systems and software</p> <p>3.4 Explain the benefits and risks of using disk partitions or other backup locations</p> <p>3.5 Establish a backup routine for data and system</p> <p>3.6 Install, set up and configure application software to meet needs</p> | <p>User interface: Operating system, date, time, language settings; <i>Set up administrator and user accounts</i>; desktop shortcuts; customise start-up; <i>memory usage; power management</i></p> <p>Security systems: Firewall, spyware, anti-spam software</p> <p>System backup: Disk partition, removable storage, disk or tape rotation, system restore points, physical location of backup</p> <p>Set up applications: Software licence; installation disks; manuals; download, default settings; download software; map network drive; register software; <i>custom installations</i></p> |

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| <p>4. Check that the IT system and communication service are working successfully</p> | <p>4.1 Explain what system tests and communication tests are needed and why<br/> 4.2 Select and run suitable tests to make sure that the system and communication service are working successfully<br/> 4.3 Explain the range of help and troubleshooting facilities available to solve problems<br/> 4.4 Establish procedures for recovery in the event of system faults or failure<br/> 4.5 Respond to faults and error messages and use help and troubleshooting facilities to determine and take appropriate action</p> | <p>System tests: Hardware and software; Print test pages, check files are saved on storage media, open and close applications; open and close files; access network files and applications; Certificates and labelling; check printer drivers; <i>de-frag, delete unwanted system files, check backup strategy, restore system files, restore data files</i></p> <p>Communication tests: Send and receive test email, navigate to ISP website; <i>check transmission speed</i></p> <p>Recovery procedures: <i>Logs and records of system components and licensed software; Boot disk; system restore and backup</i></p> |
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## Unit purpose and aim

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This is the ability to safely set up the components of an IT system (eg personal computer - PC, keyboard, mouse and printer), removable storage media (eg data stick or external DVD drive), communication service to access the Internet and associated software and check that they are working properly.

This unit is about the skills and knowledge to select and connect up an IT system with a range of hardware, removable storage media and a communication service safely and successfully and to help others to do so.

## Details of relationship between the unit and national occupational standards

This unit maps fully to competences outlined in IT User National Occupational Standards version 3 (2009).

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## Assessment

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All ITQ units may be assessed using any method, or combination of methods, which clearly demonstrates that the learning outcomes and assessment criteria have been met. Assessments must also take into account the additional information provided in the unit Purpose and Aims relating to the level of demand of:

- the activity, task, problem or question and the context in which it is set;
- the information input and output type and structure involved; and
- the IT tools, techniques or functions to be used.

See Recommended Assessment Methods in the ITQ Centre Handbook.

## Evidence requirements

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An evidence checklist must be completed without gaps.

## Guidance on assessment and evidence requirements

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Please refer to the centre handbook for ITQ 2009.