

SVQ for IT Users (ITQ) — level 3 (SCQF level 6)

F99L 04: Setting Up an IT System 3

5 SCQF credit points at SCQF level 6

Description: 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.

Outcome	Skills and Techniques	Knowledge and Understanding
<p>On completion of this Unit the candidate should be able to:</p> <p>1 Select and connect up a personal computer safely with associated hardware and storage media to meet needs.</p>	<p>1 Select and connect up the components of an IT system safely, including any peripheral devices and storage media.</p>	<p>1 Explain the reasons for choosing different system components and how to avoid any compatibility issues between hardware and software.</p> <p>2 Explain any health and safety issues associated with setting up an IT system.</p> <p>3 Explain the characteristics of IT systems that affect performance.</p>
<p>2 Select and connect IT system to a communication service successfully to meet needs.</p>	<p>1 Select and connect communication hardware safely to an IT system.</p> <p>2 Select and connect to a communication service from an IT system.</p>	<p>1 Explain the reasons for choosing a communication service.</p> <p>2 Explain what effect variations in data transmission speed may have.</p> <p>3 Explain the factors which influence choice of Internet Service Providers.</p>
<p>3 Install and configure operating system and application software ready for use.</p>	<p>1 Configure the user interface to meet needs.</p> <p>2 Install, set up and configure virus protection and other security systems and software.</p> <p>3 Establish a backup routine for data and system.</p> <p>4 Install, set up and configure application software to meet needs.</p>	<p>1 Explain what security precautions need to be addressed for the system to be used securely online by several users.</p> <p>2 Explain the benefits and risks of using disk partitions or other backup locations.</p>
<p>4 Check that the IT system and communication service are working successfully.</p>	<p>1 Select and run suitable tests to make sure that the system and communication service are working successfully.</p> <p>2 Establish procedures for recovery in the event of system faults or failure.</p> <p>3 Respond to faults and error messages and use help and troubleshooting facilities to determine and take appropriate action.</p>	<p>1 Explain what system tests and communication tests are needed and why.</p> <p>2 Explain the range of help and troubleshooting facilities available to solve problems.</p>

Note: The **emboldened** items are exemplified in the Support Notes.

Evidence Requirements

Completion of a portfolio (manual, electronic or combination) to cover all of the Skills and Techniques and Knowledge and Understanding points stated above. The evidence generated should adhere to the Assessment Strategy for this award and encompass a range of evidence types.

General information

This Unit equates to NOS (National Occupational Standards for IT Users 2009) SIS: Set Up an IT System level 3. It has a stated number of SCQF credit points = 5 at SCQF level 6.

Support Notes

Summary

A SCQF level 6 (ITQ level 3) user can select and connect up an IT system with a range of hardware, removable storage media and a communication service safely and successfully and is able to help others to do so.

Examples of context which illustrate typical activities which might be undertaken by users:

- ◆ re-configuring a PC after a new hard disk has been installed

Examples of content are given separately for highlighted text, where explanatory notes are required on terminology in the Outcomes, and do not form part of the standards. Such examples are not meant to form a prescriptive list for the purposes of assessment but rather to amplify and interpret the generic terms used in the Performance Criteria in the light of current usage of ICT systems and software. These examples are subject to change as new tools and techniques become commonplace and older ones drift out of use.

The examples given below are indicative of the learning content and are not intended to form a prescriptive list for the purpose of assessment.

Outcome 1

Compatibility issues: What problems can occur when hardware, software and operating systems are not compatible; why compatibility standards are needed.

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.

IT system performance: Processor speed, memory size, storage capacity, network capability; *graphics; display adapter.*

IT system components: Will vary according to the set up, for example: personal computer, monitor, keyboard, mouse (or other pointing device).

Peripheral devices: Speakers, modem, scanner, games console, joystick; TV, data projector, white board; plug and play devices; customised setup routines, printer and other device drivers.

Storage media: Disk, CD/DVD, data/memory stick, media card, mobile device, removable hard drive; customised setup routines; *backup media*.

Reasons for choosing storage media: Performance, capacity, accessibility, portability, security.

Outcome 2

Communication hardware: Router, modem, mobile data device, wireless router; *cables, power supply; USB, parallel, serial connections*.

Communication service: Broadband, dial up, wireless, network, mobile device, *ISP, IP configuration*.

Data transmission speed: Which combinations of hardware and software offer very fast or slower data transmission speeds; download capacity; *how much speeds in transmitting, receiving and sending data may vary*.

Outcome 3

User interface: Operating system, date, time, language settings; *set up administrator and user accounts; desktop shortcuts; customise start-up; memory usage; power management*.

Security systems: Firewall, spyware, anti-spam software.

System backup: Disk partition, removable storage, disk or tape rotation, system restore points, physical location of backup.

Set up files and software applications: Software licence; installation disks; manuals; download, customised settings; download software; map network drive; register software; *custom installations*.

Outcome 4

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; *de-frag, delete unwanted system files, check backup strategy, restore system files, restore data files*.

Communication tests: Send and receive test email, navigate to ISP website; ping IP address; *check transmission speed*.

Recovery procedures: *Logs and records of system components and licensed software; boot disk; system restore and backup*.

Guidance on examples of evidence

Typical examples of evidence for Outcome 1

Assessor checklist which demonstrates candidate competence in the selection and safe connection of a personal computer system plus associated hardware and storage media to a prescribed specification. Candidate statements on compatibility issues, health and safety issues and performance characteristics.

Typical examples of evidence for Outcome 2

Assessor checklist which demonstrates candidate competence in the connection of an IT system to a communication service to successfully meet specific requirements. Candidate statements on the reasons for choosing a communication service, what effects data transmission speeds may have, and the factors influencing choice of ISP (Internet Service Provider).

Typical examples of evidence for Outcome 3

Assessor checklist which demonstrates candidate competence in the installation, configuration of an operating system and application software. Candidate statements on what security precautions are required for the installation used by several users and the benefits and risks of using disk partitions or other backup devices.

Typical examples of evidence for Outcome 4

Assessor checklist which demonstrates candidate competence in the checking of the correct operation of the IT system and communication service. Candidate statements on the need for system and communication tests and the range of help and troubleshooting service available.