OCR
Oxford Cambridge and RSA

Unit Title:	**Optimise IT system performance**
OCR unit number:	182
Unit reference number:	H/502/4245
Level:	2
Credit value:	4
Guided learning hours:	30

Unit aim

This is the ability to keep a personal computer system up to date, fully functional and operating efficiently; and to solve problems and errors involving the interaction between hardware and software components.

This unit is about the skills and knowledge to carry out appropriate procedures to optimise system performance and solve problems and errors on most types of hardware and software using skills and experience.

Learning Outcomes	Assessment Criteria	Examples
The learner will: 1 Keep computer hardware and software operating efficiently	**The learner can:** 1.1 Describe the main features and functions of the computer operating system 1.2 Take appropriate steps to protect computer hardware from loss or damage 1.3 Configure anti-virus and other security software 1.4 Install and configure printers and other peripheral devices 1.5 Configure network settings for mobile and remote computing 1.6 Configure a computer to present or display information to an audience	• Computer system: Make, model, serial number; operating system version; memory capacity; disk capacity • Security software: Anti-virus, malware. Frequency; timing; updates, firewall settings • Network settings: Remote access, connections and shared network folders, configure remote access settings, power management
2 Manage files and disks to optimise performance	2.1 Use file navigation software to organise files into an appropriate folder structure 2.2 Backup and restore files and folders	• Information storage: Data files, folders, sub-folders, storage media; archives

Learning Outcomes	Assessment Criteria	Examples
	2.3 Describe why it is important to undertake file housekeeping of the information stored on computer systems and how it affects performance 2.4 Manage file and disk housekeeping so that information is secure and easy to find 2.5 Share files and folders with other users 2.6 Distinguish between data and system file types	• File housekeeping: Naming and labelling conventions; organising files, folders and storage media; saving back-ups; deleting unwanted files; changing default settings for saving data; properties; disk partitions
3 Troubleshoot and respond to common IT system problems and errors	3.1 Describe common IT system problems and what causes them 3.2 Describe and record IT system problems to enable effective support 3.3 Describe when to try to solve a problem independently, and when to get expert advice 3.4 Troubleshoot and respond to IT system problems appropriately 3.5 Check that errors and problems have been resolved satisfactorily	• IT system problems: Program not responding, paper jam, storage full, error dialogue, virus threat, compatibility problems; memory low • Record IT system problems: Error log, description, frequency of occurrence, severity • Expert advice: Limits of own understanding and skills, help menus, manufacturer's guidelines, how to follow advice, information needed by experts, where to get advice to deal with different hardware and software
4 Customise the working environment to optimise performance	4.1 Describe methods that can be used to optimise system performance 4.2 Select and adjust system settings to optimise performance as appropriate 4.3 Configure the automatic start of programmes and other graphical display options	• System settings: Desktop, input and output settings; display settings, multiple monitors • Optimise performance: Memory management; power management; disk partition

Learning Outcomes	Assessment Criteria	Examples
5 Maintain software to meet performance needs	5.1 Describe when and how to upgrade software 5.2 Use appropriate techniques to maintain software 5.3 Locate and install driver files for different devices	• Upgrade software: Benefits of upgrading; drawbacks of not upgrading; the need to check compatibility of software and hardware upgrades with other parts of the system • Maintain software: Install software patches and upgrades • Device drivers: Download; updates

Assessment

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 the Assessment and postal moderation section of the ITQ Centre Handbook.

Guidance on assessment

Candidates must complete the Evidence Checklist for this unit without gaps. Individual unit checklists are available to download from the qualification webpage (see forms).

In the Evidence Checklists, the examples given are indicative of the learning context at each level and are not intended to form a prescriptive list for the purpose of assessment.

Additional information

For further information regarding administration for this qualification, please refer to the OCR document '*Admin Guide: Vocational Qualifications'* on the OCR website www.ocr.org.uk .