

NQF unit:

Introduction to the World of Computers

Examination Session:

June 2015

Introduction/General comments:

Of the 23 candidates from 4 centres in Botswana 17 achieved at least a pass (74%), which is a slightly higher proportion to the previous session (70%). 13 achieved 50% or more (57%) and 4 achieved 75% or more (17%). The average percent of the marks for each question was over 40% with Question 2 being the highest scoring (64% on average).

Question 1:

57% of the candidates scored a pass mark or above on this question.

(a) Describe to them the components of a modern personal computer system and give an appropriate specification that would meet your friend's requirements

Most candidates correctly identified memory and processor as key elements of a PC specification but fewer made mention of the hard disk drive. Some marks were lost because suitable examples of typical values for each element of the specification or what the role of each component was were not given. To pass the question candidates needed to identify each element, what it does and a typical value e.g.

The processor is like the brain of the computer and a typical value would be 2.5GHz,

Memory (Random Access Memory) is the temporary storage used when processing instructions and would typically be 4GB or more.

The hard disk drive - stores the programs and files and is typically 500 GB or more.

(b) Give three examples of peripherals that your friend would need to get the most out of their new PC.

Whilst most candidates achieved some credit for this some did not understand that a peripheral is a hardware device that is connected to a PC. To achieve a pass answers such mouse, keyboard and monitor were expected.

Question 2:

83% of the candidates scored a pass mark or above on this question.

(a) State four examples of software used in a typical office.

Most candidates were able to give suitable examples of either types of office software or specific office applications such as E-mail management, Word processing, Spreadsheet, Presentation, Browser, Desktop publishing, Database, Accounting.

(b) For each example given in (a) describe the kinds of business tasks the software is used to perform.

Fewer candidates gave suitable examples of how the software they stated is used in an office setting e.g. an e-mail management program would be used to communicate with suppliers about orders and customers about their accounts.

To pass the question candidates would need to identify at least two examples of office software as well as giving suitable business examples of their use e.g.

E-mail management software - used to send e-mails to clients with details of their orders

Word processing software - used to produce letters by mail merge to update customers with statements of accounts/charges/offers

Spreadsheet software - to create budgets/accounts/analyse cash flow to allow management to make informed financial decisions

Presentation software - to create presentations to promote their products/services or for training purposes

Question 3:

74% of the candidates scored a pass mark or above on this question.

For each of the tasks listed below give an appropriate example of a computing device that could be used to perform this task, along with details of its physical size

Most candidates were able to identify suitable and different computing devices but marks were frequently lost because a lack of a clear description of the physical size of the computing device.

For a pass on this question candidates needed to correctly identify at least two of the correct computing devices as well as giving a description of its physical size e.g.

- (i) Weather forecasting - super computer - fills a large room
- (ii) Processing bank transactions - mainframe - small room size
- (iii) Producing insurance quotations when visiting customers in their homes - laptop/tablet - size approximately. 300mm x 200mm x 30mm/200mm x 150mm x 8mm
- (iv) Creating mailing labels in an office - PC/Mac/Desktop (not tablet) - 200mm x 500mm x 400 mm
- (v) Taking notes during a lecture or training session - different from (iii) - laptop/tablet/smartphone - size approximately. 300mm x 200mm x 30mm/200mm x 150mm x 8mm/ phone sized

Question 4:

52% of the candidates scored a pass mark or above on this question.

(a) (i) Explain what the letters in term GUI stand for and what a GUI is.

A significant number of candidates did not know that GUI stands for Graphical User Interface and similarly few could explain that a GUI is visual operating software interface between a user and a modern computer.

(ii) Name an alternative to the most widely used Personal Computer GUI and describe its features.

Relatively few candidates could suggest an alternative to the Windows GUI such as Android, Mac OS or Chrome OS and fewer still were able to describe the typical features such as windows, icons, menus and mouse pointers.

(b) Give an example of a Personal Computer GUI you are familiar with and describe how to format a USB disk drive using this GUI.

Most candidates that answered this question were able to achieve most of the 4 marks available.

For a pass in this question candidates needed to achieve at least 5 of the marks e.g. by identifying that GUI stands for Graphical User Interface and is a visual interface for a user to interact with some kind of computing device and correctly identifying an alternative to the Windows GUI such as Mac OS.

Question 5:

61% of the candidates scored a pass mark or above on this question.

(a) Explain what a backup is and why backups are important to organisations.

Most candidates showed some knowledge of a backup being a copy of data taken on a regular and frequent basis stored securely off site for use in the case of data loss through a disaster or wilful damage.

(b) Give two different methods of creating a backup and for each method state its advantages. Please note this question does not refer to the media on which you store the backup.

Relatively few candidates correctly identified Full and Incremental backups as the different methods and fewer still gave advantages of each method.

(c) Describe the key elements of an effective backup regime.

Again relatively few marks were achieved in this part of the question. Candidates were expected to cover the regularity frequency and timing of taking backups, the location and security of the backups and the role of staff taking the backups - understanding how to back up, why to backup and to test that the backups work.

The 5 marks required to pass this question are probably most easily achieved by identifying what a backup is and why they are important e.g. a copy of data taken on a regular and frequent basis stored securely off site for use in the case of data loss through a disaster or wilful damage along with some elements of a backup regime e.g. stored securely, off site, taken outside normal business working hours - after the end of the working day and at weekends.

Question 6:

78% of the candidates scored a pass mark or above on this question.

(a) State the name of an e-mail management program you are familiar with and the organisation responsible for providing this software.

The majority of candidates were able to identify an e-mail management program but some lost the second mark for not stating the organisation responsible for the software.

(b) For the program you stated in part (a), describe how to access and read new messages.

Although accessing the e-mail software and logging in was generally well described marks were lost for lack of detail in accessing and reading messages.

(c) With the e-mail software you stated in part (a) already loaded, describe how to create and send an e-mail message, including an attachment, to a new customer.

Again candidates generally achieved the majority of marks in this part of the question some were lost due

to lack of detail - to achieve full marks the answer needed to cover creating the new mail message, inputting the recipient/s, adding a suitable subject and message, the steps in inserting the attachment and the send process.

The 5 marks required to pass this question are most easily achieved through a detailed description of the creation and sending of an e-mail with an attachment e.g.

Click the New/Compose button or keyboard shortcut e.g. Ctrl + N

Click the To button & select the recipient/s or input addresses manually

Add any CC or BCC recipient/s

Input the message subject

Type the message

Click the Insert/Attach/Attachments/Paperclip button

Navigate to the attachment location/s

Double click each attachment

Proof read the message and spell check the message

Click the Send button or keyboard shortcut e.g. Ctrl + Enter

Question 7:

70% of the candidates scored a pass mark or above on this question.

State four different types of network topology and give one advantage and one disadvantage of each.

Most candidates were able to identify at least three network topologies (bus, ring, star, mesh) as well as some of the advantages/disadvantages of each but marks were frequently lost because examples of a suitable advantage **and** a suitable disadvantage of each topology not given.

To achieve the 5 marks for a pass in this question it is most straightforward to give 4 examples of the topologies (bus, ring, star, mesh) and correctly identifying one or more advantage/disadvantage of any of the stated topologies.

Question 8:

65% of the candidates scored a pass mark or above on this question.

(a) Describe what measures should be implemented to ensure the security of electronic data within a business.

Candidates usually gave some indication of physical security of the data as well as protection from virus and hacker attacks but fewer scripts included reference to encryption, the implementation and testing of disaster recovery plans or the monitoring of system logs.

(b) Describe what measures a network manager can implement to maximise the security of staff passwords.

Generally candidates achieved significant credit on this part but some marks were lost because the measures the users should take were described, rather than the network manager.

To achieve the 6 marks for a pass in this question it was probably easiest to give three examples for part (a) e.g.

All data storage facilities are physically secure - locked

All data storage facilities are physically protected - alarms, guards/dogs

All data storage facilities are only physically accessible to authorised users

Electronic access to electronically stored data is only for authorised users

Mobile devices that can access data are properly secured e.g. encrypted

Staff are appropriately trained/monitored in relation to data security

System software is automatically patched to reduce vulnerability

Anti-virus/anti-malware software is implemented and updated on all devices

Firewall software is installed and updated to reduce the chance of hacking

Control the use of removable media - to prevent data being removed/infected

Devise, implement and test disaster recovery plans

Monitor logs for unusual activity that could indicate an attack

and three examples for part (b) e.g.

Password aging - force change every 30 days

Password complexity - minimum number of characters, use of case/symbols etc.

Repeat password restrictions - cannot use the same password again

Restrictions on password content - name/s, dates etc.
Prevent use of the same password for multiple systems
More restrictive rules for higher level system access
Staff training and testing to ensure they understand the importance of security

Conclusions:

The pass rate has remained at 70% compared to December 2014 but there are 7 fewer candidates. As previously candidates with greatest knowledge of the syllabus have achieved highest marks.

Recommendations to students and tutors for future examinations:

In line with previous advice it is recommended that candidates fully learn the syllabus content and lecture guide. In particular PC systems and GUIs need particular attention.