Study Opportunities

November 2013

COMPUTER APPLICATIONS TECHNOLOGY
Grade 11
Paper 2 – Written

TIME: 3 HOURS   *MARKS: 150*

This question paper consists of **13** pages (cover page included)

Instructions and information

1. The question paper consists of three sections: Section A (25 marks), Section B (78) marks and Section C – the integrated scenario (47 marks).

2. Answer all the questions.

3. Read the questions carefully, taking note of the mark allocations. In general, a mark is allocated per fact. A 2 mark question would therefore require TWO facts, etc.

4. Number the answers according to the numbering system used on this question paper.

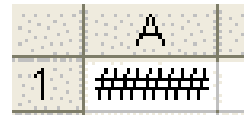5. Leave a blank line after EACH sub-question.

SECTION A

Question 1

Identify the correct answer for each question. Write down along the left side of your page only the *number* of each question, and next to it the single *capital letter* which represents the best answer, for example 1.11 A:

1.1 The best way to remove 'hash' signs that appear in a spreadsheet (as shown in the screenshot), is to …

    A. re-enter the formula or function in cell A1.

    B. format cell A1 using a different data type.

    C. widen the column.

    D. autofit the row height.   (1)

1.2 Which one of the following is the general name given to techniques that rely on persuading people to give out information or to grant access by pretending to be someone who has the right to access this information?

    A. Pharming

    B. Spyware

    C. GIGO

    D. Social engineering   (1)

1.3 Which one of the following generally ranks the computers or devices from *least* powerful to *most* powerful?

    A. Tablet PC, Smartphone, Notebook, Desktop

    B. Smartphone, Desktop, Server, Tablet PC

    C. Notebook, Laptop, Netbook, Server

    D. Smartphone, Netbook, Laptop, Server   (1)

1.4 Which one of the following is the most appropriate type of graph/chart to show how the petrol price has increased over the last 10 years?

A. Line chart

B. Area chart

C. Scatter chart

D. Pie chart (1)

1.5 Which one of the following is **not** an operating system associated with smartphones?

A. iOS 7

B. Android Jelly Bean

C. BlackBerry 10

D. Windows 7 (1)

1.6 Which one of the following refers to software used by an operating system to communicate with a device such as a printer?

A. Keylogger

B. Driver

C. Cookie

D. Firewall (1)

1.7 Which one of the following hardware items' specifications would usually be the <u>LEAST</u> important to consider when buying a new computer?

A. RAM

B. Blu-ray drive

C. CPU

D. Hard drive (1)

1.8 Which one of the following is the best example of a 'good' or 'strong' password?

A. 0826517843

B. Mary

C. QwertyUIOP

D. Q@p7Y4$_gT8 (1)

1.9 Which one of the following refers to software causing advertising to appear in pop-up windows on your PC?

A. Phishing nets

B. Firmware

C. Adware

D. Application software (1)

1.10   Which one of the following refers to software designed to run on smartphones, tablets and other mobile devices?

    A.   Shareware

    B.   Open source software

    C.   Apps

    D.   Libraries   (1)

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Question 2

State whether you think each of the following statements is TRUE or FALSE. If you think the statement is FALSE, then you also need to rewrite the statement by ONLY changing the key term (underlined) in order to make the statement true.

Example 1: A printer is an example of an <u>output</u> device.

Answer: True

Example 2: A printer is an example of <u>software</u>.

Answer: False - A printer is an example of **hardware**.

2.1   Adobe Reader is associated with <u>PDF</u> files.

2.2   A <u>WAN</u> is a network that uses wireless technologies instead of cables.

2.3   Modern hard drives have their capacity or size measured in terms of <u>MB</u>.

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Question 3

Write down along the left side of your page only the *number* of the question from Column A, and next to it the correct matching *capital letter* from Column B, for example 3.11 T.

Column A	Column B
3.1 A technology that can be used to connect to the Internet using the cellular network	A. SOHO
	B. POS
3.2 A type of cable commonly used to connect hardware together in a cabled network	C. PDA
	D. OCR
3.3 A technology that allows voice communication in a program such as Skype	E. CSV
	F. RTF
3.4 A technology that automatically sends notifications of updated content from websites to the user without the user having to access each site individually	G. PDF
	H. UTP
3.5 The address of a web page or other resource on the Internet	I. RFID
	J. NIC
3.6 A technology built into a tag that can be used to identify a person or object by reading the identification data on the tag wirelessly	K. WLAN
	L. HTTP
3.7 Software used to convert a scanned image of text so that it can be edited with a word processor	M. FTP
	N. VoIP
3.8 A port found on newer computers and devices that allows you to connect directly to TV sets that have the same port	O. RSS
	P. URL
3.9 A protocol used to transfer files over the Internet	Q. HDMI
	R. ISP
3.10 A device that can be used to connect a computer to a LAN	S. 3G

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SECTION B

Question 4

4.1 *Biometric* flash drives have become a lot cheaper to purchase.

    4.1.1   Explain the term *biometrics* in the context of ICT. (2)

    4.1.2   Give the main advantage of biometrics over other security measures such as passwords. (1)

4.2 Your mother wishes to buy a cheap monochrome ('black-and white') laser printer and needs to only print to A4 size paper.

Give TWO <u>technical</u> specifications, other than those already given, that she should consider when buying this printer.

Note that this excludes issues such as printer make, warranties, after-sales-service and cost. (2)

4.3 The frequent, long-term use of computer equipment can lead to problems ranging from RSI to headaches and eye-strain.

Give TWO things you can do in the workplace, besides the use of ergonomically designed hardware and furniture, to reduce the risk of these health-problems. (2)

4.4 Data can be backed up onto flash disks, external hard drives and optical discs such as CDs or DVDs.

Give TWO disadvantages of using optical discs, over external hard drives, to backup data. (2)

4.5 *Archiving* files can reduce both the number of files and the amount of data that needs to be backed up.

    4.5.1   What is the difference between *backing up* and *archiving* a file? (2)

    4.5.2   Give TWO other ways to reduce the amount of data that needs to be backed up (besides archiving files). (2)

4.6 While accessing a Facebook page, you were presented with the message:

You need to install the Adobe Flash plug-in to view the content on this page.

Explain what this message means by referring to the concept of a plug-in. (2)

4.7 It is important to keep software such as your office suite updated and to make sure that you have the latest *service pack* installed.

    4.7.1   Give TWO reasons why you need to keep your office suite updated. (2)

   4.7.2   Explain what a service pack is and why it is important to have the latest service pack installed. (2)

4.8 Give TWO reasons why we sometimes have to save or export a file to another file format. (2)

4.9 A friend took some photographs on her trip overseas with her digital camera. She was looking at the *metadata* of these photographs.

Briefly explain what metadata is and give ONE example of metadata specific to a photo (that is not applicable to other types of files). (2)

4.10 A friend noted that a spreadsheet file he opened from a CD is 'read-only'.

Clearly explain what the term *read-only* means in this context and outline one way of overcoming this problem. (2)

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Question 5

5.1 Your father is investigating a *broadband* Internet connection such as 3G/4G and ADSL for your home.

5.1.1 What is the main question you need to ask if you need to make a choice between an ADSL and a 3G/4G Internet connection? (1)

5.1.2 Give ONE advantage of ADSL (other than the cost and the fact that it is a broadband connection). (1)

5.2 Your father often has to travel to Namibia for business and needs to use the Internet in his hotel. One of the ways to connect to the Internet would be to use the *WiFi hotspot* in the hotel.

5.2.1 Explain what this means by explaining what a hotspot is and how and where it can be used to access the Internet when travelling. (2)

5.2.2 While in Namibia your father wants to '*Skype*' the family back home in South Africa using his webcam.

Briefly explain what it means to 'Skype' and give one reason why it might not be a good idea to use a webcam during a 'Skype session'. (2)

5.3 You were referred to the website: www.detente.mobi.uk

What does the *.mobi.uk* part of the web address indicate? (2)

5.4 The design and appearance of a website has a huge influence on whether users will return to that website in the future.

Give TWO hints or pieces of advice on how to make a website easy to navigate, i.e. follow the links. (2)

5.5 Your mother wants to set up an e-mail account so she can send out weekly newsletters to all the members of her book club.

5.5.1 What is the main difference between Instant Messaging (IM) systems like WhatsApp, and e-mail? (1)

5.5.2 While setting up her e-mail account she was presented with this 'funny looking' text and asked to enter it in a text box:
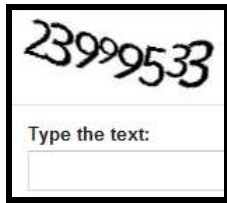
Give the general term used for this type of 'test', and briefly explain its purpose. (2)

5.5.3 Briefly explain what a contact group is in the context of e-mail and how it would assist your mother to distribute her newsletter. (2)

5.6 Many users make use of Gmail for their e-mail needs.

5.6.1 A number of Gmail users have 'numbers' in their e-mail addresses such as GarySmith45@gmail.com or XolaCabela007@gmail.com.

Explain why Gmail addresses have numbers in them. (1)

5.6.2 What are the TWO main advantages of using a web-based e-mail service like Gmail, besides any cost-related issues? (2)

5.7 Computer viruses pose a huge threat to the safety of data and information stored on computers.

5.7.1 Briefly explain how an anti-virus program can detect a file that is infected by a computer virus. (1)

5.7.2 Explain what it means when a virus is 'quarantined' and why an anti-virus program is likely to quarantine a virus. (2)

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Question 6

6.1 You are researching some information on tax regulations in South Africa. You narrowed the search down to two objective websites that give good coverage of the topic. However, the websites contradict one another (give different information) in places.

Give TWO criteria that you could use to make an informed decision as to which of the two websites is correct, without using or consulting any other source. (2)

6.2 Surveys and questionnaires should consist of *closed questions* as far as possible.

6.2.1 Explain what a closed question is by referring to a suitable example. (2)

6.2.2 Give ONE reason, in terms of the processing of the data, why it is better to have closed questions in a survey or questionnaire. (1)

6.3 Surveys and questionnaires can either be filled out manually (by hand) or completed online (electronically) on a computer.

Give THREE potential benefits of getting the respondents to complete the survey or questionnaire electronically as opposed to manually. (3)

6.4 Spreadsheets provide a number of features and facilities to analyse data.

6.4.1 Explain the main difference between the use of the *SUMIF* and *COUNTIF* spreadsheet functions, i.e. what each is used for. (2)

6.4.2 Name TWO spreadsheet features *besides* the availability and use of functions that makes a spreadsheet an ideal program to analyse data. (2)

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Question 7

7.1 Your school has an AUP (Acceptable Usage Policy) which covers Internet usage.

Give TWO items that ought to be included in an AUP for the computers at the school, besides any issues related to Internet usage and general behaviour issues. (2)

7.2 It is important to keep your *anti-spyware* updated.

Give TWO items that get updated on your anti-spyware software when you update it. (2)

7.3 The security of transactions when conducting online banking is the responsibility both of the customer and of the banks themselves.

7.3.1 Most banks recommend that you have a *firewall* installed.

Explain what a firewall is and the function it performs. (2)

7.3.2 Give TWO security measures that banks provide to their customers to protect them when banking online, besides the use of passwords and codes when they log on to the site. (2)

7.4 It is essential that accurate data is entered into a *database* in order to produce accurate, meaningful information.

Clearly explain what a *validation rule* is and how it would help in this regard. (2)

[10]

Question 8

8.1 Your sister needs to draw up a Curriculum Vitae (CV) for a job application but she is not sure where to start.

Explain why making use of a template would help in this regard, by explaining what the function of a template is. (2)

8.2 You added an automatic table of contents to a word processing document, but you find that one of the headings that you wanted to include does not appear in the table of contents.

List the TWO steps you need to take to ensure that the heading appears in the table of contents. *(Note: It is not necessary to specify any keyboard or mouse actions in your answer.)* (2)

8.3 The dialog box shown below appeared when closing a table in Design View in MS Access.
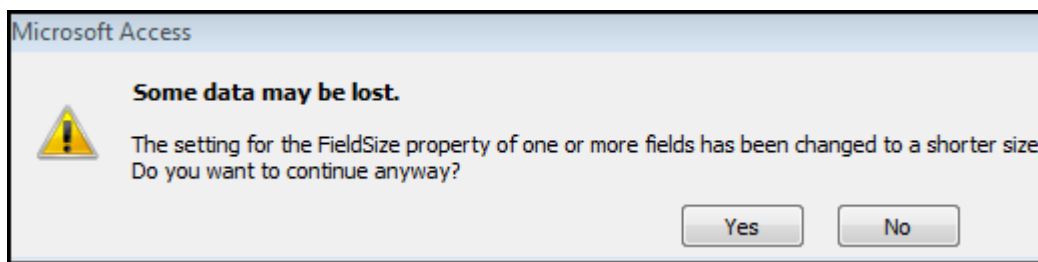
8.3.1 What does the Field Size property for a Text field specify? (2)

8.3.2 Name one type of field, besides text, that would have a Field Size property. (1)

8.4 Your school is running computer courses in the evenings. Consider the following database table which was used to keep track of the number of parents attending the courses:

Course	Surname	Name	Gender	Email	OwnPC
3	Appel	Willem	M	Appelator@mailbox.co.za	N
1	Brummer	Mary	v		Y
1	Babbage	Gert	M	GertB@yahoomail.com	Y
2	Smit	Magda	F		N
2	Moodley	Thiolan	M	ThioMoodley@mweb.co.za	N

8.4.1 The data type of the *OwnPC* field is currently set as Text.
Which other data type could be used for this field? (1)

8.4.2 Based on the data currently stored in the table, there is no field that is suitable to act as the *primary key*.
Explain what this means by referring to the TWO requirements for a field to be able to act as a primary key in a database table. (2)

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SECTION C – Integrated Scenario

Scenario:

As part of the National Youth Development initiative, the Ubuntu Trust, a local NGO (non-governmental organisation) has secured funding to establish a programme for training unemployed youth in the community. A venue in a local community centre has been secured for this purpose and a bank has donated some older, refurbished computers to help get the project off the ground. The intention is to install a wireless network so additional funding and donors need to be identified.

Question 9

9.1 One of the immediate problems is the unreliable, variable power supply in the area. Power outages also occur from time to time. A generator is far too costly to purchase and run.

Name a device that can be used to assist in this regard and give ONE way in which this device will help to deal with some of these power problems. (2)

9.2 Potential sponsors are often worried that the computers that they donate might get stolen.

Give TWO physical anti-theft strategies for the computers, besides restricting access to the building. (2)

9.3 The members of the trust want to document the progress they have made by taking pictures with a simple 'point-and-shoot' digital camera.

Give TWO specifications that one should look at when purchasing a digital camera.

Note that this excludes issues such as warranties, after-sales-service and cost. (2)

9.4 A number of the donated computers that will be used for training have old CRT monitors that are no longer working and need to be replaced.

9.4.1 Someone suggested touch screens, but these will also have some disadvantages.

Give TWO potential *disadvantages* to using touch screens besides any potential theft or cost-related issues. (2)

9.4.2 There are a number of specifications to consider when purchasing a monitor, such as contrast and aspect ratios, response time and others.

Give the TWO *most important* hardware specifications when purchasing any type of monitor. (2)

9.5 Many of the older computers have relatively small hard drives and these drives are also very fragmented.

Someone suggested that these hard drives be defragmented to free up some disk space.

9.5.1 Briefly explain what disk fragmentation is and state why it slows down the computer's performance as a whole. (2)

9.5.2 Will defragmenting the hard drives free up disk space as suggested?
Motivate your answer.
Note: you will <u>not</u> be awarded any mark for just stating 'Yes' or 'No'. (2)

9.6 Funds were secured to establish a *wireless network,* and a *file server* and a *proxy server* have also been installed as part of the network.

9.6.1 What is the general function of <u>any</u> type of server on a network? (1)

9.6.2 Give TWO *advantages* of using a file server to store all the users' files instead of each user saving them on their local hard drives. (2)

9.6.3 A proxy server is used to provide or improve Internet access for computers in a network.

Give TWO *advantages* of using a proxy server in this way, besides any cost savings. (2)

9.6.4 Give TWO *advantages* of using wireless technologies to connect a network instead of using cables. (2)

9.6.5 Give TWO potential *disadvantages* of using wireless technologies to connect a network instead of using cables, besides any cost-related issues. (2)

9.7 Using a network is a new experience for many of the Ubuntu Trust members and trainers.

Give TWO ways by which a user could tell whether he / she is actually connected to a network and not just using a standalone computer. (2)

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Question 10

10.1 Some of the computers have office suites installed – either *Microsoft Office 2003* or *LibreOffice*. A decision has been made to install *Microsoft Office 2013* on the computers that do not have an office suite installed.

10.1.1 What would be the advantage for Ubuntu Trust of using open source software like LibreOffice? (1)

10.1.2 A consultant urged the Trust members to check the *system requirements* for Microsoft Office 2013.

Briefly explain what system requirements are and why it is crucial to check them before trying to install Microsoft Office 2013. (2)

10.1.3 A product or activation key or code often needs to be entered when installing software.

Give TWO reasons why this key or code needs to be entered. (2)

10.1.4 Another choice that may need to be made in the installation process is to choose between a *Typical* and a *Full* installation.

Describe what is meant by each of these two different types of software installation. (2)

10.1.5 It has been decided to remove LibreOffice from the computers.

Give one reason why one should not simply select the relevant program folder and delete it. Also give the correct way to remove the program from the computer. (2)

10.1.6 Give TWO possible problems of using a mixture of Office 2003 and Office 2013 on different computers in the network. (2)

10.2 Some of the community members being trained have problems with their sight.

Give examples of TWO types of utility programs that can assist these users to use the computers. (It is not necessary to give actual program names.)

Note: This excludes changing settings such as the font size. (2)

10.3 A consultant suggested that the Trust look at installing *Microsoft Office 365* which makes extensive use of cloud computing and *cloud storage* in particular.

10.3.1 Explain what is meant by the term 'cloud storage'. (1)

10.3.2 Give ONE example of a service or website that offers cloud storage. (1)

10.3.3 Give TWO general advantages of cloud storage. (2)

10.4 A database has been set up to keep track of people attending the various training courses, and whether they need to have training material printed for them.

The following diagram shows a query based on the records in the database. The query was designed to show an alphabetical list of the Surnames of those people who are:

- doing both the 'Word' and the 'Excel' course; and who are

- 18 years old or younger; and who are

- needing to have their course material printed.

Field:	Name	Surname	Course	MaterialNeeded	Age
Table:	tblData	tblData	tblData	tblData	tblData
Sort:	Ascending	Ascending			
Show:	☑	☐	☑	☑	
Criteria			"Word" and "Excel"	True	>=18
or:					

10.4.1 What data type was used for the *MaterialNeeded* field? (1)

10.4.2 Give ONE reason why it would have been better to uses codes (numbers) to represent each of the courses e.g. 1 for 'Word' and 2 for 'Excel' etc. (1)

10.4.3 List any THREE problems you see with the attempt at creating this query. (3)

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TOTAL: 150