



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

COMPUTER APPLICATIONS TECHNOLOGY P2

NOVEMBER 2016

MARKS: 150

TIME: 3 hours

This question paper consists of 17 pages.

INSTRUCTIONS AND INFORMATION

1. This question paper consists of:

SECTION A (25 marks)
SECTION B (75 marks)
SECTION C (50 marks)
2. Answer ALL the questions.
3. Number the answers correctly according to the numbering system used in this question paper.
4. Start EACH question on a NEW page.
5. Do NOT write in the right-hand margin of the ANSWER BOOK.
6. Leave a line after each subquestion.
7. In general, a mark is allocated per fact. A 2-mark question would therefore require TWO facts, et cetera.
8. Write neatly and legibly.

SECTION A**QUESTION 1: MULTIPLE-CHOICE QUESTIONS**

Various options are provided as possible answers to the following questions. Write down the question number (1.1–1.10), choose the answer and make a cross (X) over the letter (A–D) of your choice in the ANSWER BOOK.

EXAMPLE:

1.1.11 **A** **B** **C** **D**

1.1 A file that has been deleted from a hard drive can be restored from the ...

- A taskbar.
- B Recycle Bin.
- C My Documents folder.
- D Apps folder.

(1)

1.2 Which ONE of the following files will most likely open directly in the 'Paint' program if the file is double-clicked?

- A Agenda.tiff
- B Data.mpeg
- C Graph.xlsx
- D Picture.mp3

(1)

1.3 The Snipping Tool accessory is used to ...

- A reduce the resolution of photos.
- B compress files.
- C make screenshots.
- D move files between folders.

(1)

1.4 What does the 'tick' symbol at printer icon 1 indicate?



- A The printer's drivers have been updated.
- B It is the default printer.
- C It is a multifunction printer.
- D The printer software has been scanned for viruses.

(1)

1.5 Which company produces operating systems such as Jelly Bean, KitKat and Lollipop?

- A Apple
- B Google
- C Microsoft
- D Avast

(1)

1.6 What does it mean when the indicator/icon below appears on the screen?



- A The speakers are disconnected.
- B The microphone connection has been disabled.
- C The accessibility features for disabled users have been enabled.
- D The sound has been muted or 'blocked'.

(1)

1.7 The *best* way to share a very large file with many users via the Internet is a/an ...

- A USB flash drive.
- B e-mail attachment.
- C cloud storage facility.
- D fax machine.

(1)

1.8 Which ONE of the following fields in a database table, which stores records of high school learners, is the *most suitable* field on which to set a default value?

- A Home Language
- B Surname
- C Address
- D Telephone Number

(1)

1.9 Which ONE of the following is the *most likely* reason why it may be necessary to use absolute addressing in a spreadsheet?

- A When constructing a graph/chart in a separate worksheet
- B When using the paste special option
- C When using any date or time function
- D When copying a formula or function to other cells

(1)

1.10 Which ONE of the following refers to a method or technique that can be used to troubleshoot software and hardware problems on a computer?

- A Safe mode
- B Hibernation
- C Plug-and-play
- D Backup

(1)

[10]

QUESTION 2: MATCHING ITEMS

Choose a term/concept from COLUMN B that matches the description in COLUMN A. Write only the letter (A–S) next to the question number (2.1–2.10) in the ANSWER BOOK, for example 2.11 T.

COLUMN A		COLUMN B	
2.1	An example of a popular, free, <i>online</i> office suite	A	utilities
2.2	A function that can be used as an alternative to the RIGHT and/or LEFT spreadsheet function	B	PPM
2.3	The general class of software under which Trojans and worms fall	C	phishing
2.4	A website that documents a person's life, opinions and interest in the form of videos	D	Google Docs
2.5	A word processing feature showing each user's contributions or alterations to the content of a shared document	E	comments
2.6	A device that can be used to store data permanently	F	cyberbullying
2.7	A potential social problem associated with social networking websites	G	RAM
2.8	The process where users are redirected to a different website than the one whose address they entered in the web browser	H	DPI
2.9	The unit in which the quality of printing is measured	I	lookup wizard
2.10	A database design feature that creates a list of options for the user to choose from when entering data in a field	J	Google Chrome
		K	streaming
		L	spooling
		M	LEN
		N	track changes
		O	SSD
		P	vlog
		Q	pharming
		R	malware
		S	MID

(10 x 1)

[10]

QUESTION 3: TRUE/FALSE ITEMS

Indicate whether the following statements are TRUE or FALSE. Choose the answer and write 'true' or 'false' next to the question number (3.1–3.5) in the ANSWER BOOK. Correct the statement if it is FALSE. Change the underlined word(s) to make the statement TRUE. (You may not simply use the word 'NOT' to change the statement. NO mark will be awarded if only FALSE is written down.)

EXAMPLES:

QUESTION	ANSWER
<u>Google</u> is the world's most popular search engine.	True
An <u>NIC</u> has slots for hardware components such as the CPU.	False – motherboard

- 3.1 The contents of HTML tags can be read wirelessly and are often used in long-distance cycling and road races during which the tags are worn by the competitors. (1)
- 3.2 A blog is an area in a place such as a café, hotel or airport where people can connect to the Internet via Wi-Fi-enabled devices. (1)
- 3.3 A hyperlink can be used to navigate on web pages and websites. (1)
- 3.4 GoPro is a manufacturer of wearable action cameras, often used to record the action in sport. (1)
- 3.5 Plagiarism refers to the legal rights of the user or creator in terms of the use and distribution of his/her own work. (1)

[5]**TOTAL SECTION A: 25**

SECTION B**QUESTION 4: SYSTEMS TECHNOLOGIES**

- 4.1 To which type or category of application software do Microsoft Edge and Mozilla Firefox belong? (1)
- 4.2 Give TWO reasons why you would want or need to upgrade the hardware of your computer, other than hardware failure. (2)
- 4.3 State TWO ways in which a user could install software on a computer that does not have an optical drive. (2)
- 4.4 Give TWO potential *disadvantages* of upgrading to a newer version of an office suite, *other* than any costs involved. (2)
- 4.5 Give TWO advantages of using HDMI technology instead of VGA technology. (2)
- 4.6 Name TWO valuable types of information that POS (point-of-sale) systems provide for store owners. (2)
- 4.7 A character started to appear repeatedly in a document, without input from the user.
Suggest TWO ways in which this problem can be solved. (2)
- 4.8 Give the keyboard shortcut key combinations (for example CTRL+F1) for each of the following tasks:
- 4.8.1 Select all the text in a document. (1)
- 4.8.2 Move to the 'previous' control (the one before the one you are currently viewing) on a form. (1)
- 4.9 When you set up a computer, you are often advised to set up and use a new account, and not the default 'Administrator' account, unless specifically required to do so.
Give TWO reasons why this is good practice. (2)

- 4.10 A friend hurriedly copied down the following specifications of a computer he saw in an advertisement and sent them to you:

- Intel Core i5 1.7 MHz
- 4 GB RAM
- 1.56"
- Windows 9 (64 bit)
- 500 GB HDD
- USB 3.0
- Bluetooth 4.0

Identify the specifications that are definitely INCORRECT by motivating what is wrong with each one. You may give the correct specifications as part of your motivation.

NOTE: No marks will be awarded for simply writing down the incorrect specifications without a suitable motivation. (2)

- 4.11 A friend was trying to open a file when a message popped up suggesting he should try to 'Look for an app in the Store'.

Explain what an *app store* is *and* why it would be used in this context. (2)

- 4.12 Give TWO reasons why it is necessary to keep an operating system updated. (2)

- 4.13 State TWO ways in which a virus infection can be prevented, *besides* updating installed antivirus software. (2)

[25]

QUESTION 5: INTERNET AND NETWORK TECHNOLOGIES

- 5.1 As what is the '802.11' communications technology or standard better known? (1)
- 5.2 Explain what the general function of a firewall is. (2)
- 5.3 Name TWO Internet technologies that can be used to reduce the monthly telephone bill of a company. (2)
- 5.4 Give TWO advantages for a user of using an app on a phone instead of a web browser to access a banking site or Facebook. (2)
- 5.5 Briefly explain what *file synching (file synchronisation)* is and why it is so useful. (2)
- 5.6 State TWO ways in which websites or Internet services allow you to regain access to your existing account if you have lost your password. (2)
- 5.7 Suggest TWO realistic ways of ensuring that the data cap/limit on your Internet lasts the whole month without reducing the amount of time you spend on the Internet. (2)
- 5.8 The 'bookmarks'/'favourites' and 'history' features on web browsers can be used to find a website that was previously visited.
- Give TWO reasons why it might be better to use the 'bookmarks'/'favourites' feature to 'remember' a previously visited website as opposed to using the 'history' feature. (2)

[15]

QUESTION 6: INFORMATION MANAGEMENT

6.1 The following item appeared in a questionnaire:

Please fill in your date of birth:

Give TWO criticisms of the *layout and format* of this item in the questionnaire. (2)

6.2 What does an asterisk (*) character generally indicate on the label of a form where you have to enter data (for example **Name *** or **Address ***)? (1)

6.3 An online survey was created with the following URL:

www.myforms/mydocuments/dp/B003FSUDM4/3Mdp/Y27P3M/survey.html

Explain why one would use a URL shortening service such as TinyURL *and* state the main benefit of using such a service. (2)

6.4 When is an online survey perhaps NOT the best option if the target group (the people who should answer the survey) is kept in mind? (1)

6.5 Give TWO potential advantages of using queries instead of filters in a database. (2)

6.6 Give ONE motivation for including a question on a respondent's *gender* in a questionnaire about social media. (1)

6.7 One of the criteria used to check the quality of information on a website is to check the date on which it was published or last updated.

Outline ONE situation where this criterion would NOT be an important factor. (1)
[10]

QUESTION 7: SOCIAL IMPLICATIONS

- 7.1 Briefly explain *how* a website or service like Kickstarter.com works to financially benefit entrepreneurs or start-up companies. (2)
- 7.2 The geotagging function of modern cameras is useful for holidaymakers and tourists.
Explain what this statement means by explaining what *geotagging* is. (2)
- 7.3 State TWO general printing options that are provided in most programs, which can be used to promote green computing. (2)
- 7.4 Computers can be controlled remotely by criminals.
- 7.4.1 What is the general name for a group of computers that have been taken over and are being controlled remotely by criminals? (1)
- 7.4.2 Give ONE example of a criminal or malicious task these groups of computers may perform. (1)
- 7.5 Give TWO potential *disadvantages* of e-learning when compared to the traditional classroom approach, besides any cost factors. (2)
- [10]**

QUESTION 8: SOLUTION DEVELOPMENT

- 8.1 Give a general name for an HTML element such as '<h1>' or ''. (1)
- 8.2 Explain why web pages should preferably NOT be saved in a 'TXT' format. (1)
- 8.3 Explain why the code for the following HTML horizontal line will NOT adjust its width automatically for different window sizes: (1)
- `<hr width="600">`
- 8.4 Explain the difference between *cell spacing* and *cell padding* in tables in word processing documents and HTML pages. (2)
- 8.5 Explain what the difference in the result would be if the AVG function were used in a *group footer* as opposed to the *report footer* in a database report. (2)
- 8.6 What is the purpose or function of a merge field in a mail merge document? (1)
- 8.7 Clearly explain what *validation text* is in the context of a database table. (2)
- 8.8 A French phrase ('De meilleures compétences') was entered in a word processing document.
- 8.8.1 How would you type or enter the 'é' character if it does NOT appear on the keyboard? (1)
- 8.8.2 State TWO ways in which you can prevent the French phrase from being indicated as a spelling or grammatical error. (2)
- 8.9 The following function was used in a spreadsheet:

=COUNTIF(A4:A7,"A*")

Explain the function or purpose of the asterisk (*) in the function by explaining what the function will do (that is, what the 'answer' would represent). (2)

[15]

TOTAL SECTION B: 75

SECTION C: INTEGRATED SCENARIOS**QUESTION 9**

A new hospital has recently been built in your neighbourhood. The hospital will be using a variety of technologies to improve service delivery and to function more efficiently.

- 9.1 Doctors will use smartphones or tablet computers to record information when visiting patients. All the information will be stored centrally on a server.
- 9.1.1 State TWO advantages of having these progress reports available electronically instead of using handwritten reports. (2)
- 9.1.2 State TWO ways in which records can be transferred from the smartphones or tablet computers and stored *directly* on the server, even if the network is not working. (2)
- 9.2 Pharmacy records will be *imported* from spreadsheet files to a central database.
- 9.2.1 What is the general purpose or use of an import function? (1)
- 9.2.2 A wizard is used to help the user through the import process. Briefly explain what a *wizard* is in this context. (2)
- 9.2.3 The import wizard displays the following options:
- Import
 - Append
 - Link
- Explain what the 'append' option allows you to do. (1)
- 9.3 The staff have been asked to add the *path* as a field in all the documents that they save on the server.
- 9.3.1 What is a *path* in this context? (1)
- 9.3.2 Explain the advantage of adding the path in all the documents that are saved on the server. (1)
- 9.3.3 Why is it important to add the path as a *field*? (1)
- 9.4 The hospital staff will be using the Internet and e-mail for communication.
- 9.4.1 Suggest TWO guidelines that the hospital staff could follow in order NOT to become victims of phishing. (2)
- 9.4.2 Many staff members have a Gmail e-mail account with random numbers in the address, for example JohnSmith999@gmail.com or XolaM1024@gmail.com.
- Why do you think so many of the staff have numbers in their e-mail addresses? (1)

- 9.5 The hospital management wants to purchase an administration software package.
- 9.5.1 The software developers have sent the hospital a trial version of a program.
What is the general name used to describe software that can be used on a trial basis? (1)
- 9.5.2 Give TWO advantages of using a trial version of software before installing the full version. (2)
- 9.5.3 The package provides a number of templates such as invoices, memoranda and business agendas.
Briefly explain what a *template* is, as well as *how* one would use it. (2)
- 9.6 The hospital is considering a BYOD (bring your own device) policy to allow staff to bring their own portable devices such as smartphones, laptops and phablets to work on and to access the hospital's network.
- 9.6.1 Briefly describe THREE of the biggest potential technical problems the hospital might find with implementing their BYOD policy.
Don't include any cost-related factors in your answer. (3)
- 9.6.2 A proxy server is also needed for Internet access.
State TWO benefits of using a proxy server, *other than* simply providing Internet access. (2)
- [24]**

QUESTION 10

You and your fellow CAT learners will be helping your CAT teacher to present classes for parents who would like to learn how to use spreadsheets or databases.

- 10.1 Parents will register for the classes by sending an e-mail to the CAT teacher with the word 'SPREADSHEETS' or 'DATABASES' in the subject line.
- 10.1.1 Which function of e-mail software can be used to automatically group or separate e-mails according to the course they enrolled for? (1)
- 10.1.2 The teacher noticed that he has not received some of the e-mails, even though they were successfully sent by the parents.
What could have happened to these e-mails? (1)
- 10.2 A YouTube video giving an introduction to spreadsheets was downloaded but you cannot remember exactly what it is called or where it is located on your hard drive.
Give TWO attributes/search filters you can use to search for the file using the search facility of your operating system.
Briefly explain *why* you would use each of these attributes/filters. (2)
- 10.3 Backups of test records from the course to the cloud will be made regularly.
Suggest TWO ways in which the school can ensure that data that has been backed up to the cloud is *secure*. (2)
- 10.4 The computers used for the course are equipped with SSDs. One of the SSDs is not detected by a computer.
Discuss TWO possible ways in which to locate and fix the problem. (2)
- 10.5 The CAT teacher will be using a blog with an RSS feed to help parents outside class times.
- 10.5.1 State TWO guidelines for creating and maintaining a successful blog, *besides* adding an RSS feed. (2)
- 10.5.2 Explain what an *RSS feed* is *and* why it saves the user time. (2)

- 10.6 The teacher wants to use QR codes (such as the one shown here) to share information with the parents about the course and the website that will be used for the course.



Give TWO potential *disadvantages* of using QR codes in this context. (2)

- 10.7 The following questions were set to test the knowledge of the parents at the end of the course:

10.7.1 A spreadsheet graph was pasted as a *linked object* into a word processing document, but it stopped displaying the graph correctly after a while.

Suggest TWO ways in which to fix this problem. (2)

10.7.2 Consider the extract below from a spreadsheet which tests whether the ID numbers (column A) contain the correct number of characters (13):

	A	B
1	ID	Correct
2	9802045081086	Y
3	980112003081	N
4	97122500900801	N

Which TWO spreadsheet functions would be used in the formulas in **cells B2:B4** to produce the output shown in these cells? (2)

10.7.3 Consider the spreadsheet below, which works out the bonus of each employee based on the number of sales and the years the person has worked.

	A	B	C
1	Number of sales	Years worked	Bonus
2	100	5	R1 000.00
3	150	1	R0.00
4	200	4	R0.00

The following nested IF function was used in **cell C2** to calculate the bonus:

=IF(A2<100,0,IF(B2>=5,10*A2,0))

Describe which TWO criteria are used for the employee to receive a bonus *without* referring directly to the function in your answer. (2)

10.7.4 What will be the effect of adding the criterion 'Is Null' to a field when a database query is run? (1)

- 10.8 One of the parents telecommutes (that is, he works from home instead of actually being present in the workplace).
- 10.8.1 Give TWO general advantages of telecommuting or teleworking for the employee. (2)
- 10.8.2 Name TWO general Internet technologies or web tools that could make it possible for him to still take part in the classes if he cannot physically attend them. (2)
- 10.9 Give ONE benefit of the CAT teacher using a data projector instead of a big screen TV set to present the course, *besides* any cost factors. (1)
- [26]**

TOTAL SECTION C: 50
GRAND TOTAL: 150



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GRADE 12

COMPUTER APPLICATIONS TECHNOLOGY P2

NOVEMBER 2016

MEMORANDUM

MARKS: 150

This memorandum consists of 17 pages.

SUGGESTIONS AND RECOMMENDATIONS TO MARKERS

- Revisit the questions and the memorandum frequently during the marking session.
- It is advisable to read the question frequently (and re-read) together with the candidate's response to check that it correlates, so that you are not misled by the candidate's statements/answers.
- Be careful not to focus on keywords or general statements, but rather read the entire answer. If in doubt, read the entire answer and then the question paper and memorandum. Ask yourself or your senior marker if the response could 'fit' into the memorandum before allocating the correct marks to the candidate. For example, the memorandum states 'cheap' and the learner responds with 'less expensive'.
- Beware of overlapping answers to a specific question. In general, one mark is awarded per fact.

SECTION A**QUESTION 1: MULTIPLE CHOICE**

1.1	B	✓	1
1.2	A	✓	1
1.3	C	✓	1
1.4	B	✓	1
1.5	B	✓	1
1.6	D	✓	1
1.7	C	✓	1
1.8	A	✓	1
1.9	D	✓	1
1.10	A	✓	1
	Total: [10]		

QUESTION 2: MATCHING ITEMS

2.1	D	✓	1
2.2	S	✓	1
2.3	R	✓	1
2.4	P	✓	1
2.5	N/E	✓	1
2.6	O	✓	1
2.7	F	✓	1
2.8	Q	✓	1
2.9	H	✓	1
2.10	I	✓	1
	Total: [10]		

QUESTION 3: MODIFIED TRUE OR FALSE

(Note to marker: In Question 3.1, 3.2 and 3.5 accept the correct term even if 'false' is not stated. Do not award a mark if only 'FALSE' is written down.)

3.1	FALSE, RFID/NFC ✓	1
3.2	FALSE, Hotspot ✓	1
3.3	TRUE ✓	1
3.4	TRUE ✓ (Accept False if another valid brand is given e.g. Google Glasses, TomTom Bandit, Garmin Virb)	1
3.5	FALSE, Copyright/EULA/Intellectual property ✓	1
		[5]

TOTAL SECTION A: 25

SECTION B**QUESTION 4: SYSTEMS TECHNOLOGIES**

4.1	(Web) browsing software/Browser✓		1
4.2	<ul style="list-style-type: none"> • Slow system performance/Improve system performance • To use new software/New software requirements/Software compatibility • For ergonomic reasons • Physical space considerations • Storage capacity needs • Computer needs to be used in a new role, e.g. as a server • Green computing concepts such as improved energy efficiency, etc. <p style="text-align: right;">✓✓(Any two)</p> <p><i>(Note to marker: Do not accept any reason related to hardware failure.)</i></p>		2
4.3	<ul style="list-style-type: none"> • Any external/portable media • Flash drive/USB Stick • Hard drive/SSD • Memory card/Internal storage of a mobile device e.g. Smartphone, etc. • Via the Internet/Web • Remote assistance/Via a network (they might be connected to) <p style="text-align: right;">✓✓(Any two)</p>		2
4.4	<ul style="list-style-type: none"> • Compatibility issues • Slower performance/Higher system requirements • Possibility of bugs • Time taken to get comfortable with changes to interface/Possible re-training required • Useful/Well-known features not available in newer version, etc. <p style="text-align: right;">✓✓(Any two)</p>		2
4.5	<ul style="list-style-type: none"> • Faster data transfer • Better picture quality/resolutions/Digital data transfer • Connect high definition TVs • HDMI transfers both sound and video <p style="text-align: right;">✓✓ (Any two)</p>		2

4.6	<ul style="list-style-type: none"> • Stock levels/control e.g. item codes, etc. • Variety/Examples of sales data • Performance of cashiers • Product data e.g. prices, etc. • Rewards/Purchasing/Sales trends, etc. <p style="text-align: right;">✓✓ (Any two)</p>		2
4.7	<ul style="list-style-type: none"> • Check if the key got stuck/Clean sticky keys • Remove any objects that may be lying on the keyboard • Replace/swop the keyboard • Disconnect/reconnect keyboard/Try different port • Restart the computer • Restart the program • Restore software to an earlier point • Run a virus scan, etc. <p style="text-align: right;">✓✓ (Any two)</p>		2
4.8.1	Cmd/Ctrl+A ✓	1	2
4.8.2	(Cmd+)Shift+Tab/(Cmd)Ctrl+Arrow keys ✓	1	
4.9	<ul style="list-style-type: none"> • Secure access to data • Prevent unauthorised installation of software • You can accidentally make critical changes to the system/You can accidentally forget to lock your computer allowing others to tamper with the system • Malware can exploit the fact that you are logged in with administrative privileges, etc. <p style="text-align: right;">✓✓ (Any two)</p> <p><i>(Note to marker: Accept if a learner refers to personalising a new account from the start.)</i></p>		2
4.10	<ul style="list-style-type: none"> • The 1.7 MHz should be measured in GHz • Windows 9 is incorrect (there was no Windows 9 – should be 8 or 10) • The 1.56" should be 15.6" <p style="text-align: right;">✓✓ (Any two)</p> <p><i>(Note to marker: Accept if just the correct versions of the incorrect specifications are written down.)</i></p>		2

4.11	App stores are websites/platform where apps can be downloaded/purchased.✓ In this case it would be to try and find an app that might/would open the file/Software to open the file not available on your device.✓		2
4.12	<ul style="list-style-type: none"> • Fix software issues/bugs • Added security • Compatibility with new software • Enhanced features/functionality, etc. <p style="text-align: right;">✓✓ (Any two)</p>		2
4.13	<ul style="list-style-type: none"> • Do not use any portable media (such as flash drives)/be careful about using portable media (scan) • Do not visit 'suspicious' websites • Do not start your computer with a flash drive or CD inserted • Do not click on links in e-mails/pop-ups • Do not download/install 'unverified'/pirated software • Disable the autorun feature for portable media • Do not open attachments from unknown e-mail addresses • Scan attachments before opening them • Keep all security features enabled, etc. <p style="text-align: right;">✓✓ (Any two)</p>		2
			[25]

QUESTION 5: INTERNET AND NETWORK TECHNOLOGIES

5.1	Wireless/Wi-Fi✓		1
5.2	A firewall controls/monitors access✓ from the network/devices to and from another network (like the Internet).✓		2
5.3	<ul style="list-style-type: none"> • VoIP • Instant Messaging • Social Networking • E-Mail <p style="text-align: right;">✓✓ (Any two)</p> <p><i>(Note to marker: Accept valid examples for each of the above, e.g. Skype/Google Hangouts, WhatsApp/WeChat, Facebook/Google+, Outlook/Gmail, etc.)</i></p>		2
5.4	<ul style="list-style-type: none"> • Fewer steps to get to the content/No need to navigate to the website • Simplified layout and functionality/App is specifically designed for the task • Immediate notifications via app • Less security risks • Less data usage, etc. <p style="text-align: right;">✓✓ (Any two)</p>		2
5.5	<p>File synchronisation is a system/method of keeping files (that are stored on multiple devices/in several different physical locations) consistent/up to date.✓</p> <p>It is useful as the same (latest copy of a) file can be accessed from a number of devices/computers/You are always working on the same/a single version of the file.✓</p>		2
5.6	<ul style="list-style-type: none"> • Using a recovery (or registered) e-mail address with a link to reset your password • Sending a message/code to your (registered) cellphone number • Asking a ('pre-arranged challenge') question (such as your place of birth, etc.) • Asking you for your last known password, etc. <p style="text-align: right;">✓✓ (Any two)</p>		2

5.7	<ul style="list-style-type: none"> • Avoid downloading large files/torrents often • Use public data access when available • Compress files being sent over the Internet • Use a browser that uses less data e.g. Opera mini, etc. • Limit the amount of video conferencing/Avoid heavy streaming/Do not watch YouTube videos too often/Stream videos (such as YouTube) in a lower resolution • Configure operating system/software to download updates manually/Switch off unnecessary updates/Restrict automatic updates/Turn off mobile data when not in use/Restrict multimedia from running automatically • Ensure nobody is piggybacking on the connection/Prevent bandwidth theft • Set up notifications to alert you of high data usage • Check/Monitor/Restrict apps that are consuming data, etc. <p style="text-align: right;">✓✓ (Any two)</p>		2
5.8	<ul style="list-style-type: none"> • Bookmarks/Favourites are only the addresses a user has chosen to record/History records all pages visited • Bookmarks/Favourites are categorised (Easier to search) /History is recorded chronologically (longer to search) • The History can be accidentally cleared <p style="text-align: right;">✓✓ (Any two)</p>		2
			[15]

QUESTION 6: INFORMATION MANAGEMENT

6.1	<ul style="list-style-type: none"> No instruction on the format of the date to be used/difficult to implement data validation/Format not consistent without datepicker No separate cells/columns to force the respondent to enter a digit per cell/to promote neatness/legibility Size of the block may be limiting, etc. <p style="text-align: right;">✓✓ (Any two)</p>		2
6.2	It means it is compulsory/mandatory/required✓ to enter data in that field		1
6.3	To create✓ a shorter URL which is easier to use/copy/paste/share/remember/read, etc.✓		2
6.4	<ul style="list-style-type: none"> When the target group does not have access to computing devices/the Internet. When the target group does not know how to use computers, etc. <p style="text-align: right;">✓ (Any one)</p>		1
6.5	<ul style="list-style-type: none"> Filters are not permanent/Filters have to be re-done each time/Queries are saved/permanent Queries have a wider range of criteria that can be used Queries allow for choosing which fields should be displayed Queries allow for calculated fields to be added Reports and forms can be based on queries Queries provide for additional options e.g. sorting, grouping, calculations, aggregate calculations, etc. <p style="text-align: right;">✓✓ (Any two)</p>		2
6.6	<ul style="list-style-type: none"> When results of a survey need to be specifically analysed/sorted/filtered according to gender Gender could be used for data validation/verification (in order to only allow a specific gender to complete the questionnaire), etc. <p style="text-align: right;">✓ (Any one)</p>		1
6.7	Accept any example or reference to when information is not time sensitive/ which would not change with time ✓ e.g. historical data/facts that will not change.		1
			[10]

QUESTION 7: SOCIAL IMPLICATIONS

7.1	They provide money for start-up projects getting multiple small donations✓ from the public✓ (usually via the Internet) <i>(Note to marker: Give only one mark for crowdfunding.)</i>		2
7.2	Geotagging refers to including the position/GPS coordinates ✓of where the photo was taken in the metadata/with the file.✓		2
7.3	<ul style="list-style-type: none"> • Print multiple pages per sheet • Print only specific pages • Print preview to catch errors before final print • Print in grayscale • Print to file • Print 'back-to-back'/both sides of pages • Print in draft/'econo'-mode <p style="text-align: right;">✓✓ (Any two)</p> <p><i>(Note to marker: Accept printer specific modes that imply 'draft' or ink-saving.)</i></p>		2
7.4.1	Botnet(Bots)/Zombie army(Zombies)✓	1	
7.4.2	<ul style="list-style-type: none"> • Phishing • Spamming • Pharming • Spreading malware, e.g. Virus, Spyware, Ransomware, etc. • DDoS (Distributed denial of service) attacks • Illegal BitCoin mining, etc. <p style="text-align: right;">✓ (Any one)</p>	1	2
7.5	<ul style="list-style-type: none"> • Lack of access to technology/working hardware/Digital Divide • Lack of technology skills to unlock/maximise potential of e-learning • Potential lack of guidance/input/feedback/monitoring from teacher • Dependent on electricity/battery life • Feelings of being isolated/Lack of human contact/Contributes to lack of socialisation skills • Health-related concerns ('Long hours of sitting'), etc. <p style="text-align: right;">✓✓ (Any two)</p> <p><i>(Note to marker: Do not accept any answers relating to costs.)</i></p>		2
			[10]

QUESTION 8: SOLUTION DEVELOPMENT

8.1	Tag✓		1
8.2	Will perhaps not automatically display/open the web page in a web browser/It will display the code rather than the web page/Will open in a text editor (e.g. WordPad)✓		1
8.3	<ul style="list-style-type: none"> The width is fixed/given as a constant Not expressed as a percentage of the width of the window <p style="text-align: right;">✓ (Any one)</p>		1
8.4	Cell spacing refers to the space between cells in (a row) in a table ✓ Cell padding refers to the space between the contents of the cell and the cell 'boundary' wall of the cell ✓		2
8.5	If the AVG function was used in a group footer in a database report, it would find the averages (for that specific field) per group✓ If the AVG function was used in the report footer, it would find the average value (for that specific field) for all records in the report ✓		2
8.6	Acts as a placeholder for the (actual) data/Indicates where the data must be placed ✓		1
8.7	Validation text is a message ✓ that gives guidance on what the input should be/that will appear when the wrong input is made✓		2
8.8.1	<ul style="list-style-type: none"> Use 'Insert Symbol' function Use ASCII codes e.g. Alt+130 Assign the letter 'é' to a key on the keyboard Re-assign the keyboard to a different language Use system software settings to assign a value to the 'e' key to type 'é' if the key is held in for a longer period of time <p style="text-align: right;">✓ (Any one)</p>	1	3
8.8.2	<ul style="list-style-type: none"> Install the French proofing tools/dictionary Set the proofing language of the text /Mark the text as French Mark the text as 'not to be checked for spelling'/Select Ignore Add to dictionary (not the best option) <p style="text-align: right;">✓✓ (Any two)</p>	2	
8.9	The function will count how many✓ cells contain text/an item starting with 'A' (uppercase or lowercase)✓		2
			[15]

TOTAL SECTION B: 75

SECTION C: INTEGRATED SCENARIO**QUESTION 9**

9.1.1	<ul style="list-style-type: none"> • Handwriting recognition functions available/No problems related to bad handwriting • Environmentally friendly • Multimedia can be included e.g. Photos • Translation software available • Saves time capturing information/No need to retype handwritten reports • Easier to communicate/share/retrieve reports • Easy/Quicker to access information • No need to store hard copies/Less physical storage space needed/Secure storage • Backup are possible • Information/statistics can be extracted from all the reports • Doctors can access patient records remotely • Data validation is possible, etc. <p style="text-align: right;">✓✓ (Any two)</p> <p><i>(Note to marker. Do not accept cheaper, faster or easier without a valid explanation.)</i></p>	2	
9.1.2	<ul style="list-style-type: none"> • Transfer files using an OTG connection/USB flash drive • Memory card • Connect using a USB cable • Bluetooth • Wi-Fi direct • NFC (to enable data transfer) <p style="text-align: right;">✓✓ (Any two)</p> <p><i>(Note to marker. Do not accept answers that relate to waiting until the server is online again.)</i></p>	2	4
9.2.1	To insert/convert data, produced by another application/in a different format, into a program ✓	1	
9.2.2	A wizard is a program/software/set of dialogs ✓ that guides/helps the user to complete a task by taking them through a sequence of steps/presenting them with various options ✓	2	
9.2.3	Appending means to add (the imported) records to an existing table✓	1	4
9.3.1	<p>A path indicates the location or folder in which the file is found/ It is the 'route' through the file system to the file✓</p> <p><i>(Note to marker: Accept answers that imply a sequence of folders.)</i></p>	1	3

9.3.2	So that it is easy to locate the file if one has the hard copy of the document ✓	1	
9.3.3	If the file is saved in a different location/folder, the field will update to the new location ✓	1	
9.4.1	<ul style="list-style-type: none"> • Try to avoid giving out personal information via the Internet • Do not follow links in e-mails from unknown senders • Contact known institutions (such as banks) that request information before sending the information • Check URL of links in an e-mail/Check actual link by hovering mouse over hyperlink • Make use of software/ISP services to stop/identify possible phishing attacks, etc. <p style="text-align: right;">✓✓ (Any two)</p> <p><i>(Note to marker: Do not accept anti-virus.)</i></p>	2	
9.4.2	<ul style="list-style-type: none"> • The e-mail address they wanted was taken/already used/Google suggested this • Personal preference/Easy to remember • To make it unique <p style="text-align: right;">✓ (Any one)</p>	1	3
9.5.1	Shareware/Demo/Trialware/Beta ✓	1	
9.5.2	<ul style="list-style-type: none"> • To test the program first (for suitability) before buying it • Checking to see if the full version is required • Checking user friendliness/Quality of user interface • Checking compatibility with existing software/hardware, etc. <p style="text-align: right;">✓✓ (Any two)</p>	2	
9.5.3	A template is a (pre-existing) document that already has some of the layout/details of the document required. ✓ The user can simply alter/customise the (basic) layout as needed. ✓	2	5

9.6.1	<ul style="list-style-type: none"> • Problems with hardware compatibility • Problems with software compatibility • Need for more expertise to support different devices • Greater concern for theft/loss of confidential information • Potential misuse of bandwidth • Potential spread of viruses • Slowing down the network, etc. <p style="text-align: right;">✓✓✓ (Any three)</p> <p><i>(Note to marker: Do not accept any cost-related answers.)</i></p>	3	
9.6.2	<ul style="list-style-type: none"> • Can speed up Internet access/Caches web pages • Can be used to mask your IP address/Can 'surf' anonymously • Can be used to monitor/restrict/control access to websites. <p style="text-align: right;">✓✓ (Any two)</p> <p><i>(Note to marker: Do not accept 'provide Internet access' as an answer.)</i></p>	2	5
			[24]

QUESTION 10

10.1.1	Message rule✓	1	
10.1.2	<ul style="list-style-type: none"> • Problem with ISP/Internet Service Provider • E-mail may have been identified as spam/Placed in/junk mail folder • Sent to the wrong e-mail address • E-mail attachment size too large • Insufficient storage/Inbox is full • Addresses have been blacklisted <p style="text-align: right;">✓ (Any one)</p>	1	2
10.2	<ul style="list-style-type: none"> • Date range (recently downloaded) • Size (videos tend to be large) • File type/file extension (search for video files e.g. MP4, etc.) • Partial name of the file (if you think you remember or can guess part of the name) <p style="text-align: right;">✓✓ (Any two)</p> <p><i>(Note to marker: Do not accept content within the file or the 'entire' name of the file on its own. Allocate a mark per attribute or motivation to a maximum of two marks)</i></p>		2
10.3	<ul style="list-style-type: none"> • Use passwords on files • Use encryption on files • Use zero-knowledge password policy • Use a secure connection • File versioning • Use a credible company • Ensure data is not shared, etc. <p style="text-align: right;">✓✓ (Any two)</p>		2
10.4	<ul style="list-style-type: none"> • Check connection • Swop out with another SSD • File system incompatible • Test SSD on another machine/Disk Management • Reboot • Test in Safe Mode, etc. <p style="text-align: right;">✓✓ (Any two)</p>		2

10.5.1	<ul style="list-style-type: none"> • Update frequently • Use catchy titles • Appropriate content for target audience • Interact with readers/comments • Keep language informal/Use language that will be easy to understand by the target audience • User friendly layout, etc. <p style="text-align: right;">✓✓ (Any two)</p> <p><i>(Note to marker: Do not accept answers related to saving time or RSS feeds.)</i></p>	2	4
10.5.2	<p>RSS feed provides a user with up-to-date information from the blog/website/Notification of new content.✓ There is therefore no need to open the blog/All updates/notifications are sent automatically ✓</p>	2	
10.6	<ul style="list-style-type: none"> • Potential lack of familiarity of/knowledge how to use a QR code among parents • QR code depends on the availability of a mobile device to scan the code/Need to have QR code scanning software • Takes time to scan • QR code might not stir interest like 'conventional' advertising • Potential mistrust/security issues – not sure to which site you are being directed, etc. <p style="text-align: right;">✓✓ (Any two)</p>		2
10.7.1	<ul style="list-style-type: none"> • Check if the source spreadsheet might have been moved/deleted from its original location • Check if the link was lost/broken as a result of moving to another computer • Correct the data in the source spreadsheet if it has been modified • Manually refresh/update the link, etc. <p style="text-align: right;">✓✓ (Any two)</p>	2	
10.7.2	IF ✓ LEN ✓	2	
10.7.3	<p>The employee only earns a bonus if they have sold 100 or more units ✓ and if they have worked for at least 5 years.✓</p> <p><i>(Note to marker: Do not accept a simple rewording of the function e.g. Years Worked >=5)</i></p>	2	

10.7.4	Only entries where that field has no values entered/is 'blank'/is 'empty' will be displayed ✓	1	7
10.8.1	<ul style="list-style-type: none"> Employee can work more flexible hours Employee may want to consider environmental/social issues such less pollution and traffic on the roads, etc. Potentially fewer distractions than in a formal office environment/Potentially greater productivity/Not wasting time travelling Telecommuters may prefer a less formal/'quieter' environment to work in Saves on the cost of transport and clothing suitable for work environments, etc. <p style="text-align: right;">✓✓ (Any two)</p>	2	4
10.8.2	<ul style="list-style-type: none"> Remote connection/VPN tools, e.g. TeamViewer, R(emote)admin, etc. VoIP tools, e.g. Skype, etc. IM tools, e.g. WhatsApp, etc. Cloud storage facilities, e.g. OneDrive, Dropbox, etc. E-mail, e.g. Gmail, Outlook, etc. Live streaming LMS systems e.g. Moodle, Google Classroom Social media e.g. Facebook group Web conferencing software, e.g. WebEx, Office Live Meeting, etc. <p style="text-align: right;">✓✓ (Any two)</p> <p><i>(Note to marker: Accept one appropriate example per category of Web/Internet tools.)</i></p>	2	
10.9	<ul style="list-style-type: none"> Bigger/Scalable size of display/Better for larger venues/audiences Portable/Easy to set up in different venues, etc. <p style="text-align: right;">✓ (Any one)</p> <p><i>(Note to marker: Ignore any factors related to costs.)</i></p>		1
			[26]

TOTAL SECTION C: 50**GRAND TOTAL: 150**