



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

COMPUTER APPLICATIONS TECHNOLOGY P2

FEBRUARY/MARCH 2016

MARKS: 150

TIME: 3 hours

This question paper consists of 16 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. Generally, one mark is allocated per fact; therefore, a 2-mark question would usually require TWO facts, et cetera.
8. Write neatly and legibly.

SECTION A**QUESTION 1: MATCHING ITEMS**

Choose a term/concept from COLUMN B that matches a description in COLUMN A. Write only the letter (A–S) next to the question number (1.1–1.10) in the ANSWER BOOK, for example 1.11 T.

COLUMN A		COLUMN B	
1.1	A handheld computing device which can also be used to make and receive calls	A	ROM
		B	report
1.2	A small program that allows the operating system to communicate with the hardware and to control it	C	blog
		D	GPS device
1.3	A type of memory that permanently stores instructions used while booting a computer	E	LAN
		F	RSS
1.4	Concepts of hardware design that considers the health and comfort of users	G	utilities
		H	questionnaire
1.5	A network that covers a limited area	I	query
		J	RSI
1.6	A general term used to describe a class of software that negatively affects your computer	K	phablet
		L	WAN
1.7	A service that automatically delivers new content or notifications of new content from websites	M	driver
		N	import
1.8	An object in a database that uses criteria to retrieve specific records or information	O	RAM
		P	malware
1.9	An instrument used to gather information from people	Q	ergonomics
		R	podcast
1.10	To transfer data from a spreadsheet for use in a database	S	formatting

(10 x 1)

[10]

QUESTION 2: MULTIPLE-CHOICE QUESTIONS

Various options are given as possible answers to the following questions. Choose the answer and write only the letter (A–D) next to the question number (2.1–2.10) in the ANSWER BOOK, for example 2.11 D.

- 2.1 Which ONE of the following is a technology commonly used to connect a variety of different devices to a computer?
- A UPS
 - B GUI
 - C USB
 - D SSD
- (1)
- 2.2 The/An ... retains the data stored on it even if the power goes off.
- A RAM
 - B HDD
 - C LED
 - D CPU
- (1)
- 2.3 A/An ... is a device that provides power to a computer system.
- A PSU
 - B ROM
 - C ATM
 - D GPS
- (1)
- 2.4 Which ONE of the following is NOT an example of a system utility?
- A Task Manager
 - B Disk Cleanup
 - C Disk Defragmenter
 - D Word Processor
- (1)
- 2.5 Which ONE of the following is NOT considered a part of the general information processing cycle used on all computers?
- A Input
 - B Analysis
 - C Output
 - D Storage
- (1)
- 2.6 Which ONE of the following refers to a private internal network which can be accessed only by employees from outside the company building?
- A VPN
 - B RSS
 - C MySpace
 - D Extranet
- (1)

- 2.7 Which ONE of the following is a company that provides services such as Internet access?
- A HTTP
 - B IP
 - C ISP
 - D URL
- (1)
- 2.8 ... is an example of an e-commerce website.
- A YouTube
 - B eBay
 - C Spotify
 - D iCloud
- (1)
- 2.9 Which ONE of the following is an e-mail field used to add another e-mail address in order to send a copy of the same message to a different recipient?
- A CD
 - B HD
 - C OS
 - D CC
- (1)
- 2.10 ... refers to an injury that can occur from the continuous use of an input device such as a keyboard.
- A RSI
 - B OMR
 - C RFID
 - D CPU
- (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.)

EXAMPLES:

QUESTION	ANSWER
Computer program instructions are executed by the <u>CPU</u> .	True
Dot matrix, inkjet and laser are types of <u>keyboards</u> .	False – printers

- 3.1 The input mask feature of a database ensures that no two records can be identical in a table. (1)
- 3.2 HTML is a markup language used to create websites. (1)
- 3.3 '*Africa' can be used as a criterion for a field in a database query to return all the records starting with the word 'Africa' in that specific field. (1)
- 3.4 Posing as someone else online is considered to be bandwidth theft. (1)
- 3.5 Freeware is a general term for e-mails sent to you that you did not request and that often contain advertising. (1)

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

SECTION B**QUESTION 4: SYSTEMS TECHNOLOGIES**

- 4.1 Give TWO reasons for converting a document to PDF format. (2)
- 4.2 What is the difference between *system software* and *application software*? (2)
- 4.3 State the TWO steps you would need to follow to close an application that has stopped working, without restarting the computer or switching it off. (2)
- 4.4 An operating system includes a number of different utility programs.
- 4.4.1 What kind of utility program is used to reduce the size of files? (1)
- 4.4.2 Describe what *printer queuing* is in terms of how it is used. (2)
- 4.5 Data needs to be kept safe due to security threats.
- 4.5.1 What type of software secretly collects private information about a user? (1)
- 4.5.2 Explain what a *firewall* is AND what its general function is. (2)
- 4.6 Explain what *adware* is AND state TWO problems related to adware. (3)
- 4.7 Explain how adding more RAM to a computer can improve the overall system performance of the computer. (2)
- 4.8 State TWO potential disadvantages of using a wireless keyboard or mouse. (2)
- 4.9 What does it mean when you say that RAM is *volatile*? (1)
- 4.10 State TWO potential disadvantages of using online applications. (2)
- 4.11 State ONE situation in which it might be necessary to restart your computer other than when it freezes or hangs. (1)
- 4.12 State TWO advantages of using HDMI technology instead of VGA technology. (2)
- [25]**

QUESTION 5: INTERNET AND NETWORK TECHNOLOGIES

- 5.1 Briefly explain the term *broadband*. (1)
- 5.2 Explain why it is not possible to connect to a Wi-Fi network using a 3G dongle. (1)
- 5.3 State TWO potential advantages of ADSL compared to 3G for Internet access at home. (2)
- 5.4 State TWO aspects or properties of an Internet connection that are required, or need to be considered, for frequent streaming of videos in high definition. (2)
- 5.5 How can a group of friends access the Internet simultaneously from their smartphones if only one of them has airtime/data? (2)
- 5.6 Name TWO ways or features that are provided in web browsers or on web pages to navigate from one website to another. (2)
- 5.7 A file download from the Internet terminated before the file could be fully downloaded.
State TWO strategies to prevent it from happening again. (2)
- 5.8 What is the name of the technology or protocol used by communication application software like Skype? (1)
- 5.9 A variety of plug-ins can be installed on web browsers.
- 5.9.1 Why would you use or need browser plug-ins? (1)
- 5.9.2 Give ONE common example of a browser plug-in. (1)
- [15]**

QUESTION 6: INFORMATION MANAGEMENT

- 6.1 Explain *plagiarism* in general terms. (1)
- 6.2 Which word processing feature must be applied to headings to allow them to appear in an automatic table of contents? (1)
- 6.3 What is the difference in function between a *citation* and a *footnote*? (2)
- 6.4 Name TWO possible layout errors in the questionnaire below. (2)

Name: _____ Class: _____ ID Number ____		
Please fill in your seven subjects in the table below.		
Grade: _____ Surname: _____		
Cellphone number:		
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>		

- 6.5 Give TWO reasons why it would be better to conduct a survey online instead of using a paper-based questionnaire. (2)
- 6.6 State TWO features of a database that can be used to ensure that the data input is accurate. (2)

[10]

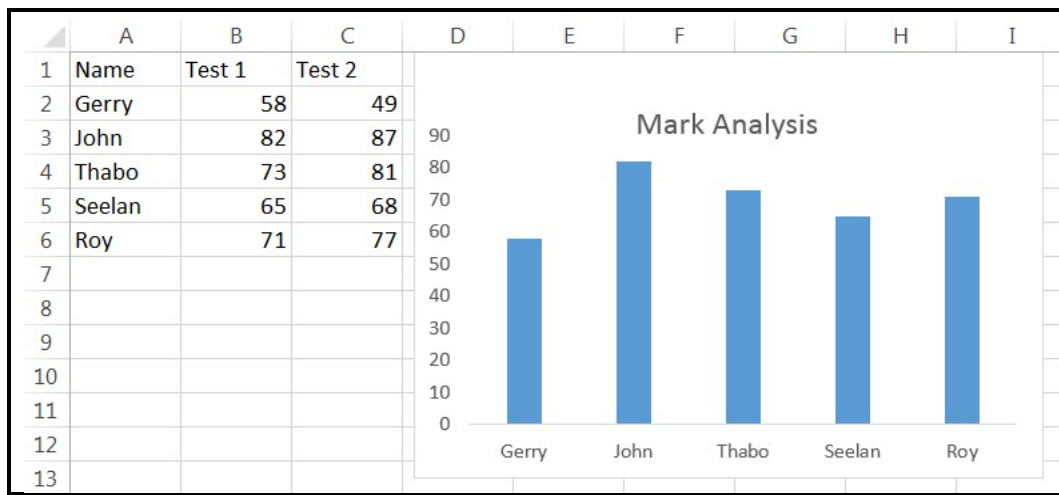
QUESTION 7: SOCIAL IMPLICATIONS

- 7.1 Name the principle or give the acronym that describes how human error or invalid data affects the quality and accuracy of output. (1)
- 7.2 Many websites insist that you use a strong password.
State TWO properties or characteristics of a strong password. (2)
- 7.3 Name a feature of instant messaging applications or social networks that can help reduce online harassment or bullying. (1)
- 7.4 State ONE potential negative effect or consequence of using pirated software. (1)
- 7.5 State TWO indications that might suggest that an e-mail is a phishing e-mail. (2)
- 7.6 You need to send a small program (.exe) file as an e-mail attachment but the e-mail program reports that it cannot accept .exe files.
- 7.6.1 What is the most likely reason why e-mail programs are set up to reject or block program or executable (.exe) files? (1)
- 7.6.2 Suggest a way to trick the e-mail program into accepting this file as an attachment. (1)
- 7.6.3 What is the name given to the set of guidelines used when composing an e-mail such as 'Do not send very large attachments'? (1)

[10]

QUESTION 8: SOLUTION DEVELOPMENT

- 8.1 Where should one place text in a word processing document so that it would automatically appear on every page? (1)
- 8.2 Which specific feature of a word processing program would you use to ensure that the first line of a paragraph starts against the left margin while the rest of the lines in the paragraph are further away from the margin? (1)
- 8.3 Study the screenshot below and answer the questions that follow.



- 8.3.1 How would you select the contents of columns A and C simultaneously to create a graph (without making any changes to the spreadsheet)? (2)
- 8.3.2 State TWO chart/graph features you could use or add to make the graph easier to interpret. (2)
- 8.3.3 Why would the following function not display the average of the marks for Test 1 in column B:

=AVG(B2:B6) (1)
- 8.4 Name the database object that helps to present information in a format that is the most suitable for printing. (1)
- 8.5 Explain what the purpose of the AutoNumber data type in a database table is by referring to how it works. (2)
- 8.6 State TWO advantages of using a query to extract information from a database instead of a filter. (2)
- 8.7 When using a picture on a website, why should the picture be stored in the same folder as the HTML file? (1)

- 8.8 The following HTML code was used to format a heading on a web page to bold:

```
<h1><b><i> Technology <h1></b></i>
```

Identify the problems or mistakes that appear in the HTML code above.

(2)
[15]

TOTAL SECTION B: 75

SECTION C**QUESTION 9: INTEGRATED SCENARIO**

Your school has been selected to test a new system where tablets and e-books will be replacing paper-based textbooks. The network infrastructure in the school will have to be upgraded and tablets purchased for each learner and staff member.

9.1 The following tablet is one of the options being considered:

- 8.0" tablet
- 1.4 GHz Quad core CPU
- 16 GB internal storage
- 2 GB RAM
- MicroSD slot
- 8 MP rear-facing camera
- 2 MP front-facing camera
- Android 4.4 KitKat
- 802.11 a/b/g/n, Bluetooth 4.0 and GPS
- Voice recognition and security software

- 9.1.1 What is the size of the screen of the tablet? (1)
- 9.1.2 Which operating system is installed on the tablet? (1)
- 9.1.3 What will the MicroSD slot be used for on this tablet? (1)
- 9.1.4 Why will the rear-facing camera typically have a higher resolution than the camera facing the user? (2)
- 9.1.5 What is the speed of the processor in the specifications? (1)
- 9.1.6 Give ONE possible use for voice recognition software other than for security purposes. (1)
- 9.1.7 Give TWO situations where a laptop would possibly be more suitable to use than a tablet. (2)
- 9.1.8 What would the information provided by a GPS device indicate to a user? (1)
- 9.1.9 What does the '802.11 a/b/g/n' specification indicate in terms of the capabilities of the tablet? (1)

- 9.2 In order for the tablets to be used effectively at school, they need to be connected to a wireless network.
- 9.2.1 State ONE situation in which it would be better to install a wired network instead of a wireless network. (1)
- 9.2.2 The school has the option of introducing BYOD.
Explain what *BYOD* is. (Do NOT simply expand the acronym.) (1)
- 9.3 Staff and learners will be able to add notes in their e-books. They will have to make regular backups of these notes in case a tablet is lost or stolen.
- 9.3.1 Give TWO reasons why backups might not be done on a regular basis. (2)
- 9.3.2 State TWO advantages of using cloud storage for backups. (2)
- 9.4 The software that is used to control the tablets has a bug that prevents it from performing as it should.
- 9.4.1 What is the main difference between a *software bug* and a *virus*? (2)
- 9.4.2 Explain the difference between a *patch* and a *service pack* in terms of fixing software bugs. (2)
- 9.4.3 Many programs allow you to give them permission to automatically download and install patches and updates without you having to do so yourself.
State TWO potential disadvantages of this approach. (2)
- 9.5 A document that a teacher needed has been deleted from her laptop; however, she still has a printed copy.
- 9.5.1 Which hardware device would she need to make a digital copy of the document? (1)
- 9.5.2 Explain what *OCR software* is and how it could assist the teacher in the scenario above. (2)
- 9.5.3 State ONE limitation of OCR software. (1)

- 9.6 The Internet will give learners the opportunity to access large amounts of information when doing research.
- 9.6.1 State TWO ways in which learners can avoid becoming victims of information overload. (2)
- 9.6.2 State TWO ways in which learners can narrow down results of an Internet search to produce fewer but more relevant results. (2)
- 9.6.3 What is the difference between a *search engine* and a *web browser*? (2)
- 9.7 Some of the tablets cannot connect to the wireless network.
- Give TWO possible reasons for this if there is nothing wrong with the tablet or the network. (2)
- 9.8 The school principal has to inform parents in a letter about an important event at the school.
- 9.8.1 The letters will be placed in personalised envelopes.
- Which word processing function could he use to automatically print the necessary details on these envelopes? (1)
- 9.8.2 Name ONE example of an instant messaging application that he can use to inform parents that the letter has been sent to them. (1)
- 9.9 The school principal would like to use crowd funding to pay for the wireless network.
- What is *crowd funding*? (2)
- 9.10 What would NFC (near field communication) be used for? (1)
- 9.11 The school principal has installed various freeware and shareware programs on his computer.
- 9.11.1 What is the major difference between *freeware* and *shareware*? (2)
- 9.11.2 Why would the school principal install shareware on his computer instead of proprietary software? (1)

- 9.12 The school has ordered three different types of tablets. Learners and staff members ordered the tablet they preferred. The school principal has created a spreadsheet to keep track of the orders.

	A	B	C	D	E	F
1	Section	Total	Option 1	Option 2	Option 3	
2	Staff	40	15	12	13	#NAME?
3	Gr 8	153	51	50	52	#NAME?
4	Gr 9	161	51	49	61	#NAME?
5	Gr 10	155	49	45	61	#NAME?
6	Gr 11	149	43	54	52	#NAME?
7	Gr 12	139	61	41	37	#NAME?

Answer the following questions based on this spreadsheet.

- 9.12.1 The functions in column F should display the word 'ERROR' only if the sum of the orders in columns C, D and E is not equal to the total in column B. The following IF function was used in cell F2 and copied to the cells below:

$$=IF(B2=TOTAL(B2:E2),"","ERROR")$$

Identify the TWO errors in the function. (2)

- 9.12.2 What type of chart/graph would be best to compare the different quantities listed in columns C, D and E? (1)

- 9.12.3 The school principal wants to create a word processing report for the school governing body containing the information from the spreadsheet.

How can he add the details from the spreadsheet to the report and ensure that any changes to the spreadsheet are automatically changed in the report? (2)

- 9.12.4 How could he make sure that users cannot select or change the cells that contain functions and formulas? (2)

TOTAL SECTION C: 50
GRAND TOTAL: 150



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GRADE 12

COMPUTER APPLICATIONS TECHNOLOGY P2

FEBRUARY/MARCH 2016

MEMORANDUM

MARKS: 150

This memorandum consists of 14 pages.

SUGGESTIONS AND RECOMMENDATIONS TO MARKERS

- Revisit the questions and the memorandum/marking guideline 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: MATCHING ITEMS**

1.1	K	✓	1
1.2	M	✓	1
1.3	A	✓	1
1.4	Q	✓	1
1.5	E	✓	1
1.6	P	✓	1
1.7	F	✓	1
1.8	I	✓	1
1.9	H	✓	1
1.10	N	✓	1
Total: [10]			

QUESTION 2: MULTIPLE-CHOICE

2.1	C	✓	1
2.2	B	✓	1
2.3	A	✓	1
2.4	D	✓	1
2.5	B	✓	1
2.6	A	✓	1
2.7	C	✓	1
2.8	B	✓	1
2.9	D	✓	1
2.10	A	✓	1
Total: [10]			

QUESTION 3: TRUE/FALSE ITEMS

(Note to marker: In Question 3.1, 3.3, 3.4 and 3.5 candidates need to provide both the word 'False' and the correct term, e.g. printers, in order to get the mark.)

3.1	False – primary key/Indexed (No duplicates) option✓	1
3.2	True✓	1
3.3	False – Africa*✓	1
3.4	False – identity✓	1
3.5	False – Spam✓	1
		[5]

TOTAL SECTION A: [25]

SECTION B**QUESTION 4: SYSTEMS TECHNOLOGIES**

4.1	<ul style="list-style-type: none"> • Cannot be edited • Can be opened irrespective of the program it was created in • PDF readers can be freely downloaded from the Internet • Potentially smaller file size • Appears exactly as when printed, etc. <p style="text-align: right;">✓✓ (Any two)</p>		2
4.2	<p>System software – controls and manages resources on a computer/allows for maintenance and running of a computer✓</p> <p>Application software – programs used to perform personal tasks/Programs that are usually installed after an operating system✓</p>		2
4.3	<p>Open the Task Manager/Press Ctrl+Alt+Del✓</p> <p>Select the task/program that has stopped working and terminate the program✓</p>		2
4.4.1	<p>Compression✓</p> <p><i>(Note to marker: Accept any suitable example of a compression utility, e.g. Winzip, WinRar, 7zip, etc.)</i></p>	1	3
4.4.2	<p>Print queuing allows print jobs sent to the printer to be temporarily stored/queued (on disk) ✓ until the printer is ready to print them/they are released ✓</p>	2	
4.5.1	<p>Spyware✓</p> <p><i>(Note to marker: Accept any specific example of spyware such as a keylogger, etc.)</i></p>	1	3
4.5.2	<p>A firewall is hardware/system software/a program used to prevent unauthorised access✓ to computers connected to a network✓ and vice versa</p>	2	
4.6	<p>Software that displays adverts/cause pop-up adverts✓</p> <p>AND</p> <ul style="list-style-type: none"> • Uses system resources/Slows the system down • Could contain malware • Adverts can be distracting/irritating • Increased bandwidth use, etc. <p style="text-align: right;">✓✓ (Any two)</p>	3	3

4.7	<p>More data/programs can be loaded into RAM✓ to be processed/less paging occurs✓</p> <p><i>(Note to marker: Accept any answers relating to faster access than from disk or reference to virtual memory for second mark.)</i></p>		2
4.8	<ul style="list-style-type: none"> • Batteries need to be replaced • More expensive than cabled/wired hardware • Possible signal interference from other wireless signals • Greater risk of theft, etc. <p style="text-align: right;">✓✓ (Any two)</p>		2
4.9	<p>It loses its contents when the computer is switched off/Needs power to retain its contents✓</p>		1
4.10	<ul style="list-style-type: none"> • Internet access must be available • Cost implications based on bandwidth usage • Potentially limited functionality (compared to installed software) • Can be slow depending on connectivity speed, etc. <p style="text-align: right;">✓✓ (Any two)</p>		2
4.11	<ul style="list-style-type: none"> • After updates have been downloaded/programs installed/When an anti-virus recommends a restart • When system seems slower than normal • After a new device has been added • Operating system/Utility program may recommend a restart, etc. <p style="text-align: right;">✓(Any one)</p> <p><i>(Note to marker: Exclude Hanging/Freezing.)</i></p>		1
4.12	<ul style="list-style-type: none"> • Supports higher resolution/better quality video • Can transmit sound and video on one cable • Newer equipment only supports HDMI <p style="text-align: right;">✓✓(Any two)</p>		2
			[25]

QUESTION 5: INTERNET AND NETWORK TECHNOLOGIES

5.1	High speed✓ transfer of data		1
5.2	3G uses cellular technology and not wireless (Wi-Fi technology)✓ <i>(Note to marker: Accept that Wi-Fi and 3G use different technologies.)</i>		1
5.3	<ul style="list-style-type: none"> • Generally lower cost per GB (a home will have multiple users) • Connection stability/less signal interference compared to 3G • Faster 3G services (LTE, etc.) not available in all areas • Generally lower ping times/Generally better for gaming/streaming, etc. <p style="text-align: right;">✓✓ (Any two)</p>		2
5.4	<ul style="list-style-type: none"> • Broadband/high speed Internet connection • Uncapped/large data allocation/bundle • Unshaped connection <p style="text-align: right;">✓✓ (Any two)</p>		2
5.5	<ul style="list-style-type: none"> • Use/share the smartphone with data as a modem/set up a hotspot✓ • All others connect from this hotspot✓ 		2
5.6	<ul style="list-style-type: none"> • Enter the URL in the address bar • Click on a hyperlink provided • Select from bookmarks/favourites • Select from History, etc. <p style="text-align: right;">✓✓ (Any two)</p> <p><i>(Note to marker: Do not accept answers not specifically related to features of a browser or web page.)</i></p>		2
5.7	<ul style="list-style-type: none"> • Resume the download/Download it again • Use a mirror-site/Choose an alternative download link • Use a download manager • Switch to another download protocol, e.g. switch from HTTP to FTP • Use another Internet connection • Torrents, etc. <p style="text-align: right;">✓✓ (Any two)</p> <p><i>(Note to marker: Do not accept 'Ask someone else to do it'.)</i></p>		2
5.8	VoIP✓		1

5.9.1	To extend the functionality of a browser/View multimedia effects✓	1	
5.9.2	<ul style="list-style-type: none">• Flash Player• Adobe Acrobat• Java(Script)• Quicktime• RealPlayer• Shockwave Player• Silverlight• Windows Media Player, etc. <p style="text-align: right;">✓ (Any one)</p>	1	
			2
			[15]

QUESTION 6: INFORMATION MANAGEMENT

6.1	Passing off someone else's work as your own ✓ without their permission		1
6.2	Styles ✓		1
6.3	Citation – reference information of a source used ✓ Footnote – additional information placed at the bottom of the page ✓ regarding a specific fact/word/phrase within a document		2
6.4	<ul style="list-style-type: none"> • Not enough places/cells/blocks in the table for seven subjects • Not enough space for an ID number • Data such as name and surname should be grouped logically/together • Not enough blocks for the cell phone number • Too much space for the class/grade <p style="text-align: right;">✓✓ (Any two)</p>		2
6.5	<ul style="list-style-type: none"> • Much larger possible audience • Free tools such as Google Forms can be used • Data will already be electronic/Do not have to retype data • Better data validation can be done • Much easier to distribute to/retrieve from respondents • Do not have to decipher bad handwriting, etc. <p style="text-align: right;">✓✓ (Any two)</p>		2
6.6	<ul style="list-style-type: none"> • Validation rules • Input masks • Default values • Using appropriate data types • Primary keys/(Index) no duplicates • Set appropriate field sizes • Make use of required/compulsory entries • Lookup wizards/List/Combo boxes, etc. <p style="text-align: right;">✓✓ (Any two)</p>		2
			[10]

QUESTION 7: SOCIAL IMPLICATIONS

7.1	GIGO✓		1
7.2	<ul style="list-style-type: none"> • Use a mixture of letters, numbers, characters • Use a mixture of uppercase and lowercase characters • The 'longer' the password the better/Have a minimum of e.g. 8 characters • Not an easily identifiable item such as a cell phone number • Do not use personal information such as a birth date, name or surname <p style="text-align: right;">✓✓ (Any two)</p>		2
7.3	Blocking/Blacklisting/'Unfriend' options✓		1
7.4	<ul style="list-style-type: none"> • May have malware (Viruses/Trojans, etc.) • Can be charged for fraud/'go to jail' • Reduced functionality/Bugs • Affects the revenue for developers, etc. <p style="text-align: right;">✓(Any one)</p>		1
7.5	<ul style="list-style-type: none"> • The e-mail address appears suspicious, e.g. strange domain name • Request to follow the link to supply additional information • A tone of urgency to comply with the request • Link inspection reveals a 'strange' web-address • The e-mail has spelling errors - unlikely to have come from a reputable institution • Requests personal information • E-mail is from an unknown source, etc. <p style="text-align: right;">✓✓ (Any two)</p>		2
7.6.1	Potentially contains malware✓	1	
7.6.2	<ul style="list-style-type: none"> • Change file extension (to a non-executable) • Put the .exe file into an archive/encrypt the file/zip file • Paste as an object in another file • Adjust e-mail server/client settings to accept 'exe' files, etc. <p style="text-align: right;">✓ (Any one)</p>	1	
7.6.3	Netiquette✓	1	
			[10]

QUESTION 8: SOLUTION DEVELOPMENT

8.1	<ul style="list-style-type: none"> Header Footer Watermark <p style="text-align: right;">✓ (Any one)</p>		1
8.2	Hanging indent✓ <i>(Note to marker: Accept tab.)</i>		1
8.3.1	Select one column✓, hold in Ctrl key and select the other column.✓	2	
8.3.2	<ul style="list-style-type: none"> More meaningful chart heading Data labels Gridlines Vertical axis titles Legend Colours/Textures Trend line Change scale/Minimum value of y-axis <p style="text-align: right;">✓✓ (Any two)</p>	2	
8.3.3	Incorrect function name used/Change AVG to AVERAGE✓	1	
8.4	Report✓		1
8.5	<ul style="list-style-type: none"> Automatically increments/increases the value in the field for every new record Ensures that there are no duplicates/it is unique Ensures that no record can be left blank Primary key <p style="text-align: right;">✓✓ (Any two)</p>		2
8.6	<ul style="list-style-type: none"> Query can be saved for future use If the table is updated the query will be automatically updated Can create reports or other queries based on existing queries Calculations can be added, etc. <p style="text-align: right;">✓✓ (Any two)</p>		2
8.7	Because the pictures are loaded from the current folder by default/Picture won't display✓		1
8.8	h1 tags has no closing tag </h1> ✓ HTML tags need to be closed in reverse order to which they are added </i> </h1> ✓		2
			[15]

TOTAL SECTION B: [75]

SECTION C**QUESTION 9: INTEGRATED SCENARIO**

9.1.1	8" (Inches)✓	1	
9.1.2	Android 4.4 KitKat✓ <i>(Note to marker: Accept Android OR KitKat)</i>	1	
9.1.3	To increase the available storage space on the tablet✓	1	
9.1.4	Rear camera is usually used to take 'normal' pictures requiring a higher resolution✓. Front facing camera is typically used for lower resolution functions such as video calls or 'selfies'✓.	2	
9.1.5	1.4 GHz✓	1	
9.1.6	<ul style="list-style-type: none"> • Giving vocal instructions to open/use apps • Voice dialling • Google search via Google's voice recognition • Assistants for the disabled, e.g. Siri • Dictating text, etc. <p style="text-align: right;">✓ (Any one)</p>	1	
9.1.7	<ul style="list-style-type: none"> • When creating or editing long documents • When a larger screen is needed • When more processing power is needed, e.g. professional photo/video editing • To use software/software functions only available to laptops/desktops, etc. <p style="text-align: right;">✓✓ (Any two)</p>	2	
9.1.8	Approximate physical/geographical position✓ <i>(Note to marker: Accept reference to the device showing the user where he/she is or that the device will indicate the direction to a final destination.)</i>	1	
9.1.9	Wi-Fi capability/Wireless✓	1	
			11

9.2.1	<ul style="list-style-type: none"> Where interference from other wireless signals might be a problem Where the higher cost of wireless is prohibitive Secure installations, etc. <p style="text-align: right;">✓ (Any one)</p> <p><i>(Note to marker: Accept any specific example of where a wired network would be better.)</i></p>	1	
9.2.2	Each person can bring/connect their own device to work/school to connect to the network.✓	1	2
9.3.1	<ul style="list-style-type: none"> People tend to forget Misplaced trust in hardware Backup mediums can be expensive for large amounts of data Backups can be time consuming Users lack the knowledge of how to perform backups, etc. <p style="text-align: right;">✓✓ (Any two)</p>	2	
9.3.2	<ul style="list-style-type: none"> Backups cannot be lost due to local backup devices failing Backups can be accessed from any computer with Internet access Backups can be synched automatically No need to connect or remove backup devices Cloud storage could potentially be a cheaper solution than multiple storage devices, etc. <p style="text-align: right;">✓✓ (Any two)</p>	2	4
9.4.1	A software bug is created by mistake/programming error✓ whereas a virus is software specifically designed to negatively affect or disrupt functioning of a computer✓.	2	
9.4.2	<p>A patch is a software solution to fix one specific problem.✓</p> <p>A service pack is a collection of all the patches/updates up to a specific point in time✓ (including new features) distributed as one package.</p>	2	
9.4.3	<ul style="list-style-type: none"> Can use lots of data/cap May not want to accept/install all the updates Programs which are not used can update, wasting space on the device and data, etc. <p style="text-align: right;">✓✓ (Any two)</p>	2	6

9.5.1	Scanner✓	1	
9.5.2	OCR will take a scanned copy/image✓ of a document and convert it into an editable document✓.	2	
9.5.3	<ul style="list-style-type: none"> • Not effective if the scanned document is of a low quality • Not always very accurate • In some cases it cannot distinguish between text and images • Language dependent, etc. <p style="text-align: right;">✓ (Any one)</p>	1	4
9.6.1	<ul style="list-style-type: none"> • Do not subscribe to too many websites for e-mail updates/Unsubscribe to mailing lists, websites • Use e-mail rules to organise/restrict e-mails • Decide on what type of information is important and what can be ignored • Store information in a logical structure, etc. <p style="text-align: right;">✓✓ (Any two)</p>	2	
9.6.2	<ul style="list-style-type: none"> • Use more keywords/Be more specific • Use search operators such as AND • Use content specific search engines • Limit to certain file types • Limit to certain domains • Include/Exclude words • Use quotations • Use date ranges, etc. <p style="text-align: right;">✓✓ (Any two)</p>	2	
9.6.3	A web browser allows a user to view web pages✓. A search engine is a program/website that allows users to search for websites based on keywords/search phrases✓.	2	6
9.7	<ul style="list-style-type: none"> • Wi-Fi signal is not strong enough • Wi-Fi is not enabled on the device • Software bug • Wi-Fi password was not added correctly • Tablet is not Wi-Fi capable, etc. <p style="text-align: right;">✓✓ (Any two)</p>		2

9.8.1	Mail merge✓	1	
9.8.2	<ul style="list-style-type: none"> • WhatsApp • BBM • iMessage • MXit • WeChat • Chat ON • Facebook Messenger, etc. <p style="text-align: right;">✓ (Any one)</p>	1	2
9.9	A process where a project practice is funded✓ by multiple small donations from many contributors✓.		2
9.10	Linking/Connecting two devices (securely) to exchange data✓		1
9.11.1	Shareware is a demonstration model/trial version of the software which can be used for a limited time period before payment should be made✓ Freeware is the full version of copyrighted software at no cost✓	2	
9.11.2	<ul style="list-style-type: none"> • Check out/Test software first before spending money • Save money if the full package is not needed/Free to download <p style="text-align: right;">✓ (Any one)</p>	1	3
9.12.1	SUM function added✓ Cell range for SUM function corrected✓ =IF(B2=SUM(C2:E2),"","ERROR") <i>(Note to marker: Also accept =IF(B2=(C2+D2+E2),"","ERROR") Accept any correct specific reference to the errors, e.g. 'The wrong function/cell range is used'.)</i>	2	
9.12.2	<ul style="list-style-type: none"> • Column chart/graph • Bar chart/graph • Line chart/graph <p style="text-align: right;">✓ (Any one)</p>	1	
9.12.3	Copy data from the spreadsheet✓ and paste it as a linked object✓	2	
9.12.4	<ul style="list-style-type: none"> • Lock/protect specific cells✓ • Protect the document✓ 	2	7

TOTAL SECTION C: [50]

GRAND TOTAL: [150]