



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