



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

COMPUTER APPLICATIONS TECHNOLOGY P2

FEBRUARY/MARCH 2015

MARKS: 150

TIME: 3 hours

This question paper consists of 15 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: 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 | The term used for marketing, buying and selling products or services over the Internet | A | podcast |
| | | B | GHz |
| 1.2 | A computer with the lowest hardware specifications which is the most affordable in its category | C | video editing software |
| | | D | firewall |
| 1.3 | A spreadsheet function used to add together the values of all the cells matching certain criteria | E | PDF |
| | | F | IM |
| 1.4 | The process of getting many people to fund a project, typically over the Internet | G | cell spacing |
| | | H | netiquette |
| 1.5 | An application that allows voice and video calls to be made over the Internet | I | entry level |
| | | J | crowd funding |
| 1.6 | A protocol or method which is mainly used to transfer very large files between computers over the Internet | K | router |
| | | L | cell padding |
| 1.7 | A set of guidelines on how to conduct oneself online and interact with other online users | M | service pack |
| | | N | e-Commerce |
| 1.8 | A technology that allows for real-time text-based communication | O | COUNTIF |
| | | P | Skype |
| 1.9 | A multimedia file downloaded from the Internet that can be transferred to computers or portable media players | Q | FTP |
| | | R | SUMIF |
| 1.10 | An attribute used to specify the distance between text and the cell border | S | access control |

(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 an example of a website that acts like an online diary giving users the option to leave comments?
- A RSS
 - B Wiki
 - C Blog
 - D Portal
- (1)
- 2.2 Which ONE of the following does NOT relate to a printer?
- A SIM
 - B Laser
 - C Ink cartridge
 - D DPI
- (1)
- 2.3 Which ONE of the following can be classified as both an input and output device?
- A Printer
 - B Scanner
 - C Speaker
 - D Touch screen
- (1)
- 2.4 Which ONE of the following refers to a feature of software where users can interact with the software by using visual controls such as buttons and icons?
- A GUI
 - B RSI
 - C GPS
 - D JPG
- (1)
- 2.5 Which ONE of the following roles does a computer assume when it connects to a server to use resources?
- A Firewall
 - B Client
 - C Storage
 - D Server
- (1)

- 2.6 Which ONE of the following refers to a situation where users are redirected to websites with criminal intent even if they type the correct address of the website into the web browser?
- A Pharming
 - B Phishing
 - C Redirecting
 - D Linking
- (1)
- 2.7 Which ONE of the following refers to a process where print jobs are placed in a queue?
- A Spooling
 - B Waiting
 - C Buffering
 - D Multitasking
- (1)
- 2.8 Which ONE of the following refers to the process of speeding up access to previously accessed data such as a web page?
- A Refreshing
 - B Caching
 - C Downloading
 - D Searching
- (1)
- 2.9 Which ONE of the following devices is NOT an example of convergence?
- A Phablet
 - B Tablet
 - C Smartphone
 - D Mouse
- (1)
- 2.10 Which ONE of the following data types is the most appropriate for storing a telephone number in a database field?
- A Number
 - B Text
 - C Yes/No
 - D Date
- (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 statements TRUE. (You may not simply use the word 'NOT' to change the statement.)

Examples:

| QUESTION: | ANSWER: |
|--|--------------------------------|
| A <u>stylus</u> can be used for more accurate input on some touch screens. | True |
| The <u>World Wide Web</u> is characterised by unequal access to ICT by different groups of people. | False <u>Digital divide</u> |

- 3.1 Converting is the process of transferring data from a database to a spreadsheet without simply copying and pasting. (1)
- 3.2 Sticky keys allow disabled users to press a combination of keys such as Ctrl, Alt and Del separately instead of together. (1)
- 3.3 Throttling is a practice where employees bring their own devices to access and use the company network. (1)
- 3.4 A query is used to collect data from a group of people. (1)
- 3.5 A section break makes it possible to have different page orientations in the same document. (1)

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

SECTION B**QUESTION 4: SYSTEMS TECHNOLOGIES**

4.1 Study the specifications of the computer below and answer the questions that follow.

- Core i5 3.2 GHz
- 6 GB RAM
- 1 TB HDD
- 23", 1920x1080 HD display screen
- 1 GB dedicated graphics
- 802.11 b/g/n, Ethernet
- DVD Multi-drive (Optional)
- Firewire
- 5xUSB 3.0
- Multi-card reader
- VGA port
- Windows 8 Home Premium

4.1.1 What is the speed of the processor in the specifications above? (1)

4.1.2 Which hardware device can be connected to the computer when additional USB ports are needed? (1)

4.1.3 Name the component in the specifications that would influence the overall performance of the computer the most. (1)

4.1.4 Which specification above refers to screen resolution? (1)

4.1.5 What item missing from the specifications would allow the monitor in the specifications above to be connected to the computer and to make full use of the monitor's capabilities? (2)

4.2 Computer systems are sometimes bundled with software which protects the data and files on the computer.

4.2.1 Name the type of utility program that is used to protect your computer from being accessed over a network. Do NOT give brand names. (1)

4.2.2 Name TWO general functions of an antivirus program. (2)

4.3 A DVD drive is included in the specifications as an option.

Give TWO reasons, other than cost, why a user may decide not to include it. (2)

4.4 One of the specifications in the advertisement is '802.11 b/g/n'.

Explain what the 802.11 and b/g/n specification would indicate. (2)

- 4.5 State TWO disadvantages of adware, other than the fact that it might be annoying. (2)
- 4.6 Give ONE reason why it is an advantage for a graphics card to have its own memory. (1)
- 4.7 Study the printer specifications below and answer the questions that follow.
- Four individual ink cartridges
 - USB 3.0
 - Memory card reader
 - 25 ppm – colour
 - 802.11 b/g/n
- 4.7.1 State TWO advantages of having four separate ink cartridges. (2)
- 4.7.2 Which specification refers to the printing speed? (1)
- 4.7.3 State TWO disadvantages of using a laser printer instead of an inkjet printer. (2)
- 4.7.4 Recommend a way to print a document using less ink, without changing the document in any way. (1)
- 4.7.5 What would the advantage be of having a card reader in a printer? (1)
- 4.8 Describe the TWO main steps you would need to take to close a non-responsive application. (2)
- [25]**

QUESTION 5: INTERNET AND NETWORK TECHNOLOGIES

- 5.1 Give a general or generic term/acronym for a computer network spread over a large area such as a country. (1)
- 5.2 Which network device is required for connecting a LAN to another network? (1)
- 5.3 State TWO possible advantages of using a cabled network instead of a wireless network. (2)
- 5.4 What is needed to establish a Bluetooth connection between two devices if all the required Bluetooth options have already been enabled and correctly set on both devices? (1)
- 5.5 A data cap is an important consideration when choosing an Internet connection.
Briefly explain what *data cap* means in this context. (1)
- 5.6 Many users feel that having an uncapped Internet connection is always the best choice.
State TWO possible advantages of choosing a capped Internet connection. (2)
- 5.7 When using no additional hardware, how could one share a tablet's 3G Internet connection with other tablets in the same room? (1)
- 5.8 Suggest TWO ways in which you can prevent advertisements appearing on the screen while you are using the Internet. (2)
- 5.9 VoIP software, such as Skype, is becoming increasingly popular to use.
- 5.9.1 Give TWO reasons why more people are currently using Skype than in the past. (2)
- 5.9.2 Give ONE reason why the video and sound quality is sometimes poor when using Skype to make a video call. (1)
- 5.9.3 Suggest ONE way in which the sound quality of a VoIP call can be improved without ending the session or changing any hardware. (1)

[15]

QUESTION 6: INFORMATION MANAGEMENT

6.1 Explain what is meant by the term *plagiarism*. (2)

6.2 The form below has been created to capture data into a database.

| | | | |
|--------------------------|----------------------------|---------------------------|--------------------------|
| Subject 3 Mathematics | Subject 7 Tourism | Subject 4 Economics | Age 17 |
| Grade 12 | Class D | Subject 6 Life Science | Subject 5 Computer Ap |
| Subject 1 English Hom | Subject 2 Xhosa First A | Name Thando | Surname Mahlakahlaka |

State TWO ways in which the layout of the form may be improved. (2)

6.3 Name THREE features of a spreadsheet which make it an ideal tool for analysing data. (3)

6.4 Explain what a *bibliography* is AND why it must always be added to a research report. (2)

6.5 Why is it important to make a note of the date on which you retrieved data for a project from a website, besides needing it in your referencing? (1)
[10]

QUESTION 7: SOCIAL IMPLICATIONS

7.1 What is the general term given to any attempt to manipulate or trick a user into giving away confidential information such as passwords? (1)

7.2 ICT makes telecommuting or teleworking possible.

7.2.1 Describe what *telecommuting* is. (2)

7.2.2 Give TWO possible reasons why you think telecommuting is not as popular in South Africa as in other countries. (2)

7.3 What is the meaning of the term *hacking*? (2)

7.4 Information overload is becoming an increasing problem in society.

State TWO practical ways in which one can use technology to reduce the problem of information overload in one's life. (2)

7.5 Give a definition for *grid computing*. (1)
[10]

QUESTION 8: SOLUTION DEVELOPMENT

8.1 Web page development.

8.1.1 What is the difference between *www* and the *Internet*? (2)

8.1.2 Identify the error in the following section of HTML code:

```
<html>
  <body bgcolor="black">
  </body>
</html>
```

(1)

8.2 In which specific section of a database report would you have to place a function to count the total number of records listed in the report? (1)

8.3 Study the spreadsheet below and answer the questions that follow.

| | A | B | C | D | E |
|----|----------------------------|-------------|-------------|-------------|-------------|
| 1 | Grade 12 marks | | | | |
| 2 | | | | | |
| 3 | Number | Name | Mark | Pass | |
| 4 | 1 | Leonard | 45 | Yes | |
| 5 | 2 | Mario | 39 | No | |
| 6 | 3 | Thabo | 27 | No | |
| 7 | 4 | Susan | 81 | Yes | |
| 8 | 5 | Jonas | 78 | Yes | |
| 9 | 6 | Gavin | 74 | Yes | |
| 10 | 7 | Atha | 65 | Yes | |
| 11 | 8 | Joe | 55 | Yes | |
| 12 | 9 | Stacy | 68 | Yes | |
| 13 | 10 | Sethu | 69 | Yes | |
| 14 | | | | | |
| 15 | <i>Students 80 or more</i> | | 1 | 8 | <i>Pass</i> |
| 16 | <i>Total marks</i> | | 601.10 | 2 | <i>Fail</i> |

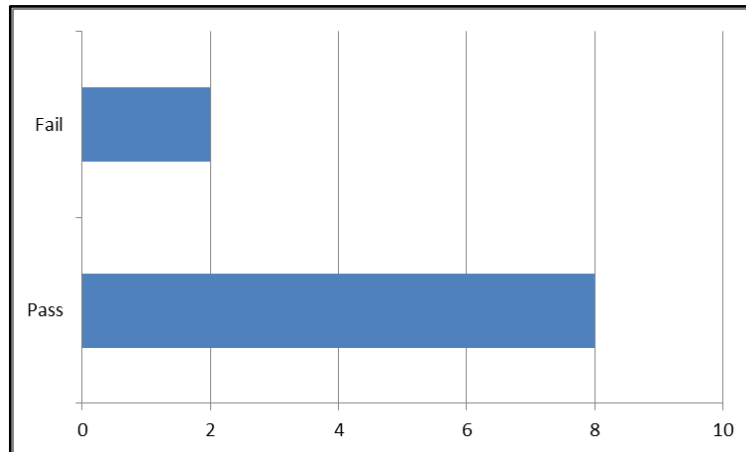
8.3.1 Which function would be used in **cell C15** to determine how many students scored 80 marks or more? (1)8.3.2 Even though the marks in **cells C4:C13** were formatted to the nearest whole number, the total of all the marks in **cell C16** shows a value after the decimal point.

Explain why this is happening by referring to the difference between using formatting and using the ROUND function. (2)

8.3.3 Name the most suitable data type that should be used in **cells D4:D13**. (1)

8.3.4 Name a function that could be used in column D to automatically give the answer 'Yes' or 'No', based on the marks in column C. (1)

8.3.5 A bar graph/chart has been created to show the proportion of students that passed or failed.



Suggest a more suitable type of graph/chart to display this information. (1)

8.3.6 When entering a phone number into a cell on the worksheet, the 0 in front of the number falls away, for example 0831234567 is displayed as 831234567.

Explain why this happens and suggest a possible solution. (2)

8.4 When opening a file on your computer, a message might appear indicating that the file is 'read-only'.

Give TWO possible reasons why the file may be 'read-only'. (2)

8.5 Suggest ONE way of correctly uninstalling a program from a computer system. (1)
[15]

TOTAL SECTION B: 75

SECTION C**QUESTION 9: INTEGRATED SCENARIO****SCENARIO**

Mr Joseph has recently started a travel agency. He needs a technical assistant to help him and he has approached you due to your CAT skills. Help him understand how computer technology can make his business more efficient.

- 9.1 RFID tags and bar codes have a similar function.
- 9.1.1 What medium does an RFID reader use to read an RFID tag? (1)
- 9.1.2 What medium does a bar-code scanner use to read a bar code? (1)
- 9.2 What is the advantage of using a QR code in an advertisement? (1)
- 9.3 Mr Joseph spends a lot of time on social networking websites promoting his business.
- 9.3.1 Give TWO examples of social networking websites. (2)
- 9.3.2 State TWO advantages for the travel agency of advertising on a social networking website. (2)
- 9.3.3 How can Mr Joseph ensure that the reputation of his business is not harmed if he makes use of social networking websites? (2)
- 9.4 You recommend that Mr Joseph buys a GPS device for the business.
- 9.4.1 Give TWO reasons why one would prefer to use a GPS device rather than using a printed map. (2)
- 9.4.2 State TWO advantages of using geotagging on a photograph. (2)
- 9.5 Mr Joseph has taken out a new cellular contract for the business.
- 9.5.1 He has a choice between a smartphone and a phablet.
What is the main difference between a *smartphone* and a *phablet*? (1)
- 9.5.2 The specifications indicate that both devices are LTE-ready.
Briefly explain what *LTE* is. Do NOT simply expand the abbreviation. (2)
- 9.5.3 Give TWO reasons why Mr Joseph may have chosen to have the Android operating system on this device. (2)

- 9.5.4 Name TWO basic functions of operating systems such as Android or Microsoft Windows. (2)
- 9.5.5 The operating system on the phablet needs to be updated to the latest version.
Give ONE reason why Mr Joseph would prefer to use an ADSL connection rather than a cellular connection to download the update. (1)
- 9.6 Mr Joseph has stored a lot of confidential information on his laptop computer at work.
- 9.6.1 State TWO practical ways in which he can prevent his laptop computer from being stolen from his office. (2)
- 9.6.2 Give TWO examples of biometric features for secure access on a laptop computer. (2)
- 9.7 The operating system on Mr Joseph's laptop has a software bug.
What is a *software bug*? (1)
- 9.8 The laptop computer has a standard touch screen.
- 9.8.1 State TWO advantages of using a touch screen. (2)
- 9.8.2 What term is given to the action used on a multi-touch screen to make a photograph smaller? (1)
- 9.9 Mr Joseph did not install an office suite on his laptop.
- 9.9.1 What is an *office suite*? (1)
- 9.9.2 State TWO advantages of using an office suite. (2)
- 9.9.3 State ONE advantage of using an online spreadsheet application compared to one installed on Mr Joseph's laptop computer. (1)
- 9.9.4 Name TWO cases in which it would be more appropriate to use a database than a spreadsheet. (2)
- 9.10 Mr Joseph uses an electronic form to capture the details of his clients.
State TWO advantages of this approach instead of using pen and paper. (2)
- 9.11 A website for Mr Joseph's travel agency needs to be created.
State THREE guidelines that would make a website easy to use and read. (3)

- 9.12 Mr Joseph's laptop computer has crashed and it can no longer boot.
Give a possible reason why this has happened. (1)
- 9.13 Mr Joseph has been advised to store his data in the cloud.
State TWO advantages of using the cloud to store data. (2)
- 9.14 Mr Joseph has considered hiring a network administrator to manage the network for the travel agency.
Name THREE typical functions performed by a network administrator. (3)
- 9.15 Besides the social networking sites, Mr Joseph wants to use a blog for the agency.
Suggest TWO ways in which he can attract readers to the blog and maintain their interest in reading the blog in the future. (2)
- 9.16 Mr Joseph is worried about security on his computers.
- 9.16.1 Explain to Mr Joseph why a keylogger can be a very dangerous type of malware. (1)
- 9.16.2 State ONE function performed by most Internet security suites other than preventing virus infections. (1)
- TOTAL SECTION C: 50**
GRAND TOTAL: 150