



education

Department:
Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

COMPUTER APPLICATIONS TECHNOLOGY P2

EXEMPLAR 2008

MARKS: 150

TIME: 3 hours

This question paper consists of 14 pages.

INSTRUCTIONS AND INFORMATION

1. This question paper consists of TWO sections, namely SECTION A and SECTION B.
2. Answer ALL the questions.
3. Read ALL the questions carefully.
4. Number the answers correctly according to the numbering system used in this question paper.
5. Write neatly and legibly.

SECTION A**QUESTION 1**

Various possible options are provided as answers to the following questions. Choose the answer and write only the letter (A – D) next to the question number (1.1 –1.10) in the ANSWER BOOK, for example 1.11 D.

- 1.1 Which ONE of the following is NOT associated with obtaining help when using a software package?
- A Macros
 - B FAQs
 - C Wizard
 - D F1 key
- (1)
- 1.2 Which ONE of the following terms does NOT logically belong with the others?
- A EDGE
 - B GPRS
 - C ISDN
 - D HSDPA
- (1)
- 1.3 Which ONE of the following would NOT be a consideration when deciding on which mode of communication one has to use to present the findings of research to a target audience?
- A Is there a need for such interactivity?
 - B How much detail needs to be conveyed?
 - C How long is the presentation?
 - D Which search engine should be used?
- (1)
- 1.4 Which ONE of the following is a typical example of a WAN?
- A Users connected via a Bluetooth connection
 - B A network in a school
 - C Any network linked with fibre-optic cable
 - D A country-wide network of a bank
- (1)
- 1.5 Which ONE of the following e-mail options allows you to send a copy of the message so that the recipient's name is not visible to other recipients of the message?
- A Cc
 - B To
 - C Bcc
 - D Forward
- (1)

- 1.6 Which ONE of the following is NOT a consideration when making a choice of a broadband connection?
- A Cap
 - B Type of network card used
 - C Availability and coverage
 - D Need for portability
- (1)
- 1.7 Which ONE of the following terms does NOT logically belong with the others?
- A HTTPS
 - B Amazon.com
 - C Hub
 - D Shopping cart
- (1)
- 1.8 Which ONE of the following is NOT associated with green computing?
- A Paperless offices
 - B Reusing ink cartridges
 - C Using Energy Star compatible hardware
 - D Replacing computer equipment every three years
- (1)
- 1.9 Which ONE of the following is NOT a trend associated with the rapid growth in technology?
- A Convergence
 - B More privacy
 - C Need for lifelong learning
 - D Knowledge workers
- (1)
- 1.10 The most appropriate chart type to show a trend such as the price of fuel over a period of time is a ...
- A pie chart.
 - B line chart.
 - C scatter chart.
 - D bar chart.
- (1)
[10]

QUESTION 2

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

| COLUMN A | | COLUMN B |
|-----------------|--|------------------|
| 2.1 | The electronic equivalent of 'junk mail' sent out in bulk without the recipients requesting it | A ADSL B BIOS |
| 2.2 | A hardware component manufactured by companies such as Intel, AMD and Motorola | C CPU |
| 2.3 | A portable wireless internet connection available in South Africa | D CTS E dpi |
| 2.4 | A port commonly used to connect hardware ranging from printers to flash disks | F eBay |
| 2.5 | A device that enables a computer to send and receive information via telephone lines | G EULA H GPS |
| 2.6 | An example of a portable digital audio player | I iBurst |
| 2.7 | A unit of measurement of resolution associated with both monitors and printers | J iPod |
| 2.8 | A technology that allows voice conversations to take place via a network such as the internet | K modem L ppm |
| 2.9 | An example of an online auction website | M spam |
| 2.10 | A device that can be used to determine your geographical location using satellite technology | N USB O VoIP |

[10]**TOTAL SECTION A: 20**

SECTION B

SCENARIO

Your school, Columbus High, is hosting a big athletics meeting for schools. You serve on the organising committee. You are expected to give technical advice, assist in the pre-planning, manage events on the day, and at the end of the day report on the performance of participants and schools, the expenses for the day and other relevant items.

QUESTION 3

- 3.1 The principal is a bit sceptical about the need to use computers for the sports meeting as they 'never needed them before and got by just fine!'.
- 3.1.1 Counter the principal's view by outlining TWO advantages of computerising the data as opposed to processing the data and information manually, as was done for past meetings. (2)
- 3.1.2 State TWO potential drawbacks or obstacles that may need to be overcome if the organisers decide to go ahead and make use of computer technology to help organise and run the athletics meeting. (2)
- 3.2 Your school has offered to purchase an additional computer to use on the day of the meeting. Consider the advertisements shown below:

Intel® Centrino® Duo Mobile Technology

- Intel Core™ Duo 1.2 GHz Processor
- Mobile Intel® 945PM Express chipset
- P5 motherboard
- 4 X USB2.0 ports
- Wireless Internet
- Microsoft Windows XP Professional
- Microsoft Office
- 512MB DDR RAM
- 80GB SATA Hard Drive
- 15" WXGA screen
- Dual Layer DVD writer



R5 999.99



Intel® Pentium IV

- Intel Core™ Duo Processor
- 2.1 GHz Intel Pentium 4
- 1024 MB RAM
- 160 GB SATA HDD
- Mouse & 101-keyboard included
- 24" Samsung Synmaster Digital SVGA monitor
- Novell Suse Linux 9.0 edition
- LOGIC sub-woofer speakers with multi-driver
- USB ADSL Mecer modem with Conexant chipset
- CD/DVD-RW drive 32x

R3 999.99

- 3.2.1 Which of these computers has the faster CPU speed (laptop or desktop)? Specify the speed of this CPU in your answer. (2)
- 3.2.2 What is the capacity of the primary memory of the laptop on offer? (1)
- 3.2.3 Identify the open source operating system included with one of these computers. (1)
- 3.2.4 The two types of internet connections that are listed in the adverts are wireless and ADSL. Give TWO reasons why it might be preferable to use a wireless as opposed to an ADSL internet connection on the day of the meeting. (2)
- 3.2.5 The laptop includes a DVD writer. Will this device be able to read and write CDs? Briefly substantiate your answer. (1)
- 3.3 You would like to have a digital camera to be able to record the events of the day. Name TWO specifications that you ought to consider when choosing a digital camera, besides the cost and warranty. (2)
- 3.4 After the event the photographs would have to be available to be included in a newsletter or posted on the school's website. Name TWO ways in which the photograph files could be transferred (saved) from the digital camera to the computer. (2)
- 3.5 You would like to be able to print high-quality colour photographs taken of the event. Recommend the best *type* of printer to perform these tasks. (1)
- 3.6 The computer you chose has a wireless mouse. State ONE advantage and ONE disadvantage of using a wireless mouse on the day of the meeting. (2)
- 3.7 State ONE advantage and ONE disadvantage of using the laptop as opposed to the desktop computer on the day of the meeting. (2)
- [20]**

QUESTION 4

- 4.1 Before the event, all previous records as well as the details for all participants need to be captured and stored in a database. Because of the large amount of data needed, this will require data capturers to sit for many hours at a computer.
- 4.1.1 One of the common ailments associated with spending a lot of time typing on a computer is RSI.
Briefly explain what *RSI* is. Do NOT explain what the abbreviation stands for but rather describe what the term means. (1)
- 4.1.2 One of the ways of preventing RSI is to make use of an ergonomically designed keyboard. Describe what the term *ergonomics* means by referring to a feature you would typically find on an ergonomically designed keyboard. (3)
- 4.1.3 Suggest TWO possible methods of entering data that do not require keying (typing) it in. (2)
- 4.2 The programme has to include previous South African records for each event. The best source for this information will be the internet. Your initial search for 'SA records' came up with 76 900 000 hits!
- 4.2.1 Suggest TWO ways in which you could refine your search to get 'more accurate' results. (2)
- 4.2.2 You were working on this same computer two days ago and found a relevant website but are unable to remember its URL. How would you find this site without searching for it all over again? (1)
- 4.2.3 You would like to access this site regularly. What is the best way to make the URL easier to access quickly in the future? (1)
- 4.3 You sent the programme for the meeting as an attachment to a printing company, but their firewall rejected the attachment. They suggested sending the attachment in PDF format.
- 4.3.1 Explain what a *firewall* is and what its function is. (2)
- 4.3.2 Give TWO possible reasons why a firewall might reject an e-mail attachment. (2)
- 4.3.3 Why do people frequently send attachments in PDF format? In your answer briefly explain what *PDF format* is. (2)

- 4.4 The printing company also requires that you burn a CD with the programme of events on it.
- 4.4.1 What does it mean to *burn a CD*? (1)
- 4.4.2 What equipment would you need to burn a CD? (1)
- 4.4.3 When you try to burn the CD, you cannot read from the CD afterwards.
- Assuming that the computer hardware is working correctly, give TWO tips or suggestions as to what you could do to solve this problem. (2)
- [20]**

QUESTION 5

- 5.1 You have decided to use your word-processing program to design a programme for and an invitation to the event.
- 5.1.1 You would like to include a table of the events for the day, but it is too wide to fit across the page. State TWO ways in which you could solve this problem besides changing the font or font size. (2)
- 5.1.2 The picture you would like to insert in the invitation keeps on 'jumping around' and disappearing behind the text. Give the most likely reason that this keeps on happening and briefly explain how to overcome this problem. (2)
- 5.1.3 You have tried to insert a table of contents for the brochure advertising the event, but some of the entries that are supposed to be in the table do not appear. Briefly explain how you would solve this problem. (2)
- 5.1.4 One of the organisers complains that every time he starts a new word-processing document he has to change the default margin settings. Briefly explain what is meant by the term *default* in this context and give ONE possible solution to this problem. (2)
- 5.2 You included a photograph of the sports pavilion on the front cover of the invitation. Someone brought in a stiffy disk to receive a copy of the photograph *Pavilion.bmp*, but when you try to save it, the file is too big.
- 5.2.1 What is the typical storage capacity of a stiffy disk? (1)
- 5.2.2 State TWO ways in which you can solve the problem of the file being 'too big'. (2)

- 5.3 The school has opened a special bank account for the costs associated with the meeting.
- 5.3.1 When you log onto the internet banking site you see a warning about phishing. Briefly explain what *phishing* means by referring to ONE typical way in which phishing attacks occur. (2)
- 5.3.2 State TWO security measures that banks use to improve the security of internet banking transactions. (2)
- 5.4 You are required to carefully keep track of the budget for the event and decide that a spreadsheet program is the most obvious tool to do this. Suggest TWO tools or features of a spreadsheet you could use to alert you when you are overspending. (2)
- [17]**

QUESTION 6

- 6.1 You need to record the details of all the entrants. Two of the organisers are arguing whether a spreadsheet or a database should be used to record the details of the entrants and to capture and process the results on the day of the meeting.
- 6.1.1 State TWO advantages of using a spreadsheet and TWO advantages of using a database in these circumstances. (4)
- 6.1.2 Each entrant will have to have a unique entrant number.
- State TWO features of a database program that could be used to ensure that no two entrants have the same entry number. (2)
- 6.1.3 Design a database structure for the contestants' records. Name THREE fields of DIFFERENT TYPES that would be required and suggest what the field type should be for each field you list. (3)
- 6.1.4 Give TWO reasons why you would use a form in a database to capture the data instead of allowing the user to enter data directly into the table in the database. (2)

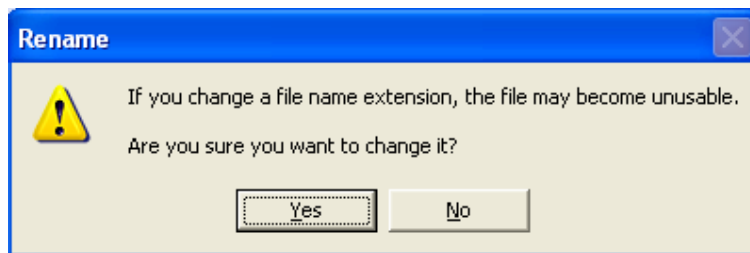
- 6.2 The database has been designed to capture the five heights scored by each high-jump contestant, but there was an oversight in that the *average* of all five of these heights also needs to be calculated for each contestant.

Describe TWO ways in which you can solve this problem besides doing all the calculations manually. (2)

- 6.3 A database is only as good as the quality and accuracy of the data that is captured into the database.

State TWO features or tools of a database that could be used to reduce the number of data-capturing errors and maximise the validity of the data. (2)

- 6.4 You have created a database file called *comtestants.mdb*. When you notice your spelling error you try to rename the file, and you receive the following error message:



- 6.4.1 Briefly explain what a *file extension* is. (1)

- 6.4.2 Explain why this message occurred and why the file may 'become unusable'. (2)

- 6.5 All the hundreds of entrants' details have been captured and a letter has to be sent to all the individual entrants so that they can confirm their entry details.

Explain how you would be able to do this. Describe the process you would follow, NOT the specific menu options you would select. (3)

- 6.6 A local sportswear retailer has offered the school a R1 000 donation in exchange for a copy of the database containing the entrants' details.

- 6.6.1 Give TWO reasons why a company would pay money to obtain this database. (2)

- 6.6.2 Briefly discuss the ethics of selling this database. (2)

[25]

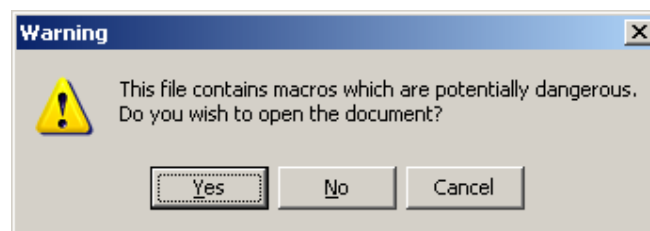
QUESTION 7

- 7.1 The school wishes to make use of their internet site for promoting and facilitating the organisation of the athletics meeting. They currently use Telkom as their ISP and their website is located at the following address:
- http://www.columbushighschool.org.za.***
- 7.1.1 Briefly describe what the function of an ISP is. (2)
- 7.1.2 The *.org* part is one of several top-level domain names. What does the *.org* in an URL generally indicate? (2)
- 7.1.3 Each of the organisers needs to be assigned an e-mail address. Would it be better to use their current ISP to set up e-mail addresses or to rather make use of a web-based e-mail service such as Webmail? Give TWO reasons to support your answer. (2)
- 7.1.4 A web page for the meeting has been created. List THREE factors that could influence web surfers to return to the website besides the actual content itself. (3)
- 7.1.5 As part of a publicity drive you have been encouraged to set up a *blog* and make use of *podcasts* on the website. Explain EACH of these concepts. (2)
- 7.1.6 Briefly explain what a *domain name* is in terms of the internet and list the domain name of the school. (2)
- 7.2 On the day of the meeting a message saying that the laptop is about to hibernate appears on the screen.
- 7.2.1 Explain the meaning of this message. (1)
- 7.2.2 Why does this message appear on the laptop but not on a PC? (1)
- 7.3 The organisers are worried that there may be a power outage on the day of the meeting.
- 7.3.1 Give ONE reason why a power outage could result in a loss of data. (1)
- 7.3.2 What hardware can the organisers consider using to ensure that they do not unnecessarily lose data due to a power outage? (1)

- 7.4 You received a message on your screen while using the web browser saying that '*pop-ups are blocked*' and that the option to allow pop-ups should be enabled. A colleague suggested that it was done to block spyware.
- 7.4.1 Briefly explain what *spyware* is. (2)
- 7.4.2 What is a *pop-up*? (2)
- 7.4.3 Give some advice as to whether the option to allow pop-ups should be enabled or not. Substantiate your answer. (2)
- 7.5 During the day of the meeting, some of the data capturers complain that the computer has become slow. Someone suggested disabling the auto-protect option of the anti-virus software as this is slowing down the computer and since they are not connected to the internet, the threat of viruses is minimal.
- 7.5.1 Explain clearly what a *computer virus* is. (3)
- 7.5.2 Comment critically on the advice that was given. (2)
- [28]**

QUESTION 8

- 8.1 Some of the records set at previous meetings were typed in a table in a word-processing document. Describe how one could get this information in a table in a database without having to retype all the data. (3)
- 8.2 A number of the entrants' names use diacritic characters such as the é in Fouché or the ü in Bülbring. How can the data capturers enter these characters if they are not on the keyboard? (1)
- 8.3 When opening a word-processing document containing the names of potential sponsors, the following dialogue box appears:



- Clearly explain what *macros* are by referring to an appropriate example of where they might be used and also comment on why they are regarded as being 'potentially dangerous'. (4)

- 8.4 During the meeting it becomes evident that the free disk space on the laptop is running low and it has been suggested that it might be a good idea to defragment the hard drive to free up extra disk space.
- Explain why this advice does not make sense by clearly explaining what a disk defragmentation program does. (3)
- 8.5 One of the organisers suggested that the entrants enter a numeric value or code which represents the school or club they represent from a list of possible clubs and schools (together with their respective 'codes').
- State TWO possible benefits of this approach. (2)
- 8.6 One of the organisers has set up a spreadsheet keeping statistics of the number of entrants per age group and per gender.
- However, she is a bit confused, as her son who helped her used dollar signs in some of the formulas and not in others.
- 8.6.1 What do we call this type of cell referencing where the cell references are prefixed with a dollar sign, for example A\$5? (1)
- 8.6.2 Briefly explain why in some cases we use this type of cell referencing and not in other cases by referring to an appropriate example. (3)
- 8.7 The same organiser has also set up a series of graphs in a report prepared in a word-processing document. She does not, however, want to have to redo the graphs every time the data changes in the spreadsheet.
- Explain to her how she can overcome this problem by explaining the difference between *embedding objects* and *linking objects*. (3)

[20]**TOTAL SECTION B: 130****GRAND TOTAL: 150**