



NATIONAL SENIOR CERTIFICATE EXAMINATION
NOVEMBER 2014

COMPUTER APPLICATIONS TECHNOLOGY: PAPER I

MARKING GUIDELINES

Time: 3 hours

150 marks

These marking guidelines are prepared for use by examiners and sub-examiners, all of whom are required to attend a standardisation meeting to ensure that the guidelines are consistently interpreted and applied in the marking of candidates' scripts.

The IEB will not enter into any discussions or correspondence about any marking guidelines. It is acknowledged that there may be different views about some matters of emphasis or detail in the guidelines. It is also recognised that, without the benefit of attendance at a standardisation meeting, there may be different interpretations of the application of the marking guidelines.

SECTION A

QUESTION 1

- | | | | | |
|-----|-------|--|-----|-------------|
| 1.1 | 1.1.1 | (a) | D | (1) |
| | | (b) | A | (1) |
| | | (c) | G | (1) |
| | | (d) | H | (1) |
| | | (e) | B | (1) |
| | 1.1.2 | (a) | PAN | (1) |
| | | (b) | LAN | (1) |
| | | (c) | MAN | (1) |
| | | (d) | WAN | (1) |
| | | (e) | GAN | (1) |
| 1.2 | 1.2.1 | This is primary memory used to store information permanently. | | (2) |
| | 1.2.2 | System Software used to optimise the operation of the computer. | | (2) |
| | 1.2.3 | Bulk/advertising e-mail JunkMail sent that is unwanted or unsolicited. | | (2) |
| | 1.2.4 | The process in which the contents of computer memory is copied for use in problem analysis. | | (2) |
| | 1.2.5 | A folder usually on the Desktop used to store deleted files before they are permanently deleted. | | (2) |
| | | | | [20] |

QUESTION 2

- | | | |
|-----|---|------------|
| 2.1 | C | (1) |
| 2.2 | B | (1) |
| 2.3 | B | (1) |
| 2.4 | B | (1) |
| 2.5 | D | (1) |
| | | [5] |

25 marks

SECTION B

QUESTION 3

- 3.1 *Any TWO of:*
- Shutting the computer down incorrectly could over time lead to premature component failure
 - Small power surges could damage components
 - Running programs that do not shut down correctly (Also data) could become corrupted (2)
- 3.2 *Any ONE valid solution:*
- Clean the mouse
 - Re-install the driver
 - Check its connection to the port/check mouse on another computer
 - Check that there are no conflicts with other hardware devices (1)
- 3.3 Hard drive failure or corruption could cause the file names and folder names to become garbled. (1)
- 3.4 *Any TWO valid solutions:*
- Booting your system up in safe mode.
 - Restore your system to its last known good configuration
 - Re-install the operating system
 - Repair using the installation media (2)
- 3.5 The older games are not always compatible/incompatible with the newer operating system. (1)
- 3.6 3.6.1 A full installation installs all components of the software package (1)
- 3.6.2 A custom installation only installs those components of the software package that are selected by the user. **OR** A user may select where the software is installed (1)
- 3.6.3 A typical installation installs the minimum components required to use the software package. **OR** A user may not select where the software is installed. (1)
- 3.7 Choosing 'Save' will save the current version of the file over the last saved version of the file. Choosing 'Save As ...' brings up a prompt to save the file with a different name. **OR** to keep the same name but save in a different location. (2)

3.8

LABEL NUMBER	NAME OF PORT/ CONNECTOR/ INTERFACE	FUNCTION
3.8.1	Power Socket	Connecting the power supply/computer to electricity mains
3.8.2	Audio In/Out	Connect to devices like speakers, headphones, microphones, headsets
3.8.3	Ethernet OR (LAN) Networking port	Connect to a network OR to the Internet
3.8.4	USB ports	Connecting any USB enabled device like a printer, mouse, keyboard
3.8.5	VGA Port	For plugging in, monitors/screens/ projectors
3.8.6	HDMI	Interface for High Definition multimedia
3.8.7	PS/2 port	Specifically used to plug in a keyboard or a mouse

(14)
[26]

QUESTION 4

- 4.1 4.1.1 Any **ONE** valid hardware device:
- Modem
 - Router
 - Tethered cellphone/mobile hotspot/3G Dongle
- (1)
- 4.1.2 Any **TWO** valid software programs:
- Communications software
 - Dial-up software
 - Software to connect to Internet
 - Web browser
 - E-mail program
 - FTP Program
 - Instant messenger
- (Accept brand names)-No Brand Names (2)
- 4.1.3 An ISP or Internet Service Provider (1)
- 4.2 Any **TWO** valid answers:
- email with a file attachment/faxMail
 - FTP/uploading to web site
 - Instant Messaging (Accept Brand Names)
- (2)
- 4.3 4.3.1 Any **TWO** valid reasons:
- Will allow for much faster download rates/faster access or exchange of information
 - Ideal for watching/streaming video
 - Always on – do not have to wait for system to dial up
 - The uncapped option is not metered/Pay a single flat monthly charge
 - Can use phone while surfing – only one telephone line needed
- (2)
- 4.3.2 Any **ONE** valid advantage:
- Fewer cables
 - More people can be connected to a wireless network than wired network
 - Students can sit anywhere on campus/move around and still be connected
- Any **ONE** valid disadvantage:
- Fewer wireless devices can be connected
 - Slower transmission speed (than wired)
 - The signal could be blocked by obstructions
 - Limited range (wired can be as long as needed using amplifiers as needed)
 - Laptop computer might not be wireless enabled
- (2)

4.4 4.4.1 For example, the following words should be added, namely:

Southern African (1)

4.4.2 Any **ONE** valid advantage:

- Much more information available
 - Can download text/diagrams/photos
 - Can set up multimedia presentations
 - Can interact directly with mining companies
 - Use translation software to translate foreign language reports
 - Several people can access the same data at the same time
 - Usually up-to-date information available/continually changing
 - Easier to reference information
 - Can do complex searches for the data
- (1)

4.5 4.5.1 Any **TWO** valid features:

- Product description
 - Prices
 - Goods on sale
 - Hyperlinks to information sites about the products
 - Security for payment method
 - Shopping basket feature
 - Search the website for a particular product
 - Help facility, e.g. site map
 - Ability to select products from drop down boxes
 - Convert prices to local currency
 - Make suggestions for purchases based on past orders
 - Email of invoices/statements/delivery notes/information
 - Track the delivery of orders
 - Returns policy
- (2)

4.5.2 Any **TWO** valid advantages:

- No time spent travelling to store
 - Benefits the disabled who can't move about easily
 - No travelling expenses such as petrol
 - There is a larger selection of goods to choose from
 - You can comparison shop
 - You can shop 24/7/365
 - There are no security issues with carrying cash money
- (2)

[16]

QUESTION 5

5.1 Any **THREE** valid answers:

- The main SAPS server keeps details of all criminals
 - The main SAPS server keeps details of all crimes committed
 - The SAPS computer system is connected to worldwide police networks, such as Interpol, for sharing information
 - Motor vehicle number plates can be tracked immediately
 - Evidence from speed cameras/CCTV is captured immediately
 - Alarm systems are connected directly to the nearest Police Station
 - Evidence from suspects' computers can be analysed
 - DNA profiling/fingerprinting
 - Faces can be compared
 - Tracing phishing scams
- (3)

5.2 5.2.1 Any **ONE** valid method:

- Check passwords/codes/fingerprints/retina scans/biometric devices
 - Encrypt the data
 - Install firewalls
- (1)

5.2.2 Any **ONE** valid method:

- Lock keyboard so there is no unauthorised access to the computer
 - Backup/store the data on memory sticks/external hard drive in a secure location
 - Set up a hardware firewall
- (1)

5.3 5.3.1 Input – (reflected) light from the photograph subject is captured by the sensors in the digital camera.
Processing – These dots of light are converted to pixels by the microprocessor.

(2)

5.3.2 Any **TWO** valid reasons:

- There is no need to buy photographic film
 - The storage device in the digital camera is re-useable
 - You can take as many photographs as you want at the same cost
 - A digital camera can correct such errors as moving subjects/red eye
 - There are no picture development costs involved when using a digital camera
 - A smartphone has a built-in digital camera so a separate camera does not have to be purchased
- (2)

[9]

QUESTION 6

6.1 Any **TWO** valid answers:

- A student can learn at own speed/pace
 - The materials can be filled with multimedia
 - A student can learn at any time
 - The studying and testing can be done online
 - A student can repeat any part of the course as needed
 - Teachers can tutor/videoconference with students online
 - There is no need for a designated venue for classes/examinations
 - The test results are immediately available due to automatic marking
 - The number of students taking a particular course is not limited by the classroom size
 - Disabled students will find it easier to participate
 - Costs are lower
 - Students can come from all parts of the world
- (2)

6.2 6.2.1 Any **ONE** valid hardware device:

- Sensors to pick up movement of the disabled student
 - Larger tracker ball/mouse so that it is easier to manipulate
 - Touch pad/screen for students with limited movement
 - Specially adapted keyboard/Braille keyboard for blind students
 - A mouth pen for quadriplegic students
 - A microphone for paralysed students
 - High contrast monitors for visually impaired students
 - Larger keys on a larger keyboard
 - Foot controls
- (1)

6.2.2 Any **ONE** valid software program:

- Voice recognition software for paralysed students
 - Predictive texting in word processors for paralysed students
 - On screen keyboards for students with limited movement
 - Screen Magnifier and Zoom for visually impaired students
 - Braille Output/Voice synthesis programs giving the on-screen instructions for blind students
- (Do Not Accept brand names)
- (1)

6.3 6.3.1 Any **TWO** valid security precautions:

- User must register with their South African ID Number
 - A user will be issued with a secret password to vote which can only be used once (OTP or a One Time Pin)
 - To ensure that this required backup always takes place, a backup electrical power supply should be available
- (2)

6.3.2 Any **TWO** valid advantages:

- Vote counting takes place immediately
- Human error is removed from the vote counting
- There will be fewer spoilt ballots
- Time is saved because voters do not have to queue
- Less consumables like paper and ink are used
- Greater numbers of voters can be processed at once
- (Operational) Costs are lowered
- Voter turnout could increase
- Disabled voters would be able to vote more easily
- Voters who are away from their voting district on Election Day could still vote

(2)

6.3.3 Any **TWO** valid disadvantages:

- Only those voters with Internet access can use the system
- Voters may not be comfortable using the system
- Identity theft could also be a risk
- It is more difficult to prove that a vote has been cast compared to having a paper ballot
- If an area suffers an electricity blackout, potential voters could lose their right to vote

(2)

[10]

QUESTION 7

7.1 7.1.1 The UnitID field. (1)

7.1.2 Between 1000 and 6000
OR
> = 1000 AND <= 6000 (1)

7.1.3 (a) B02, B07, B09, B10. (Mark *negatively* from a maximum of 2) (2)
(b) B02. (1)
(c) The only record that satisfies both conditions is B02. (1)

7.1.4

UnitID	Suburb	Type	Additions	Rent/pm
B05	Fauna	1 bed flat	Garden	R1200.00
B01	Fauna	3 bed flat	Carport	R2900.00
B11	Fauna	3 bed flat	Carport	R5600.00
B04	Groenvlei	1 bed flat	BICs	R2800.00
B10	Heuwelsig	2 bed flat	Carport	R4700.00
B03	Heuwelsig	3 bed flat	Carport	R5000.00
B06	Rayton	3 bed flat	Garden	R4000.00
B07	Universitas	1 bed flat	Pool	R2400.00
B08	Universitas	3 bed flat	BICs	R5100.00
B02	Willows	2 bed flat	Pool	R2500.00
B09	Willows	2 bed flat	BICs	R4400.00

B05, B01, B11, B04 (Must be in correct order) (4)

7.2 7.2.1 Any **TWO** valid disadvantages:

- The employee is isolated/There is less social interaction
- Phone always being used for business and is therefore not available for private family use
- There are many personal distractions at home
- There could be added stress on the family/More distractions (2)

7.2.2 Any **TWO** valid reasons:

- Set up video conferencing facilities to allow for personal face to face interaction (avoids isolation of employee)
- Install a second business telephone line or cellphone connection (avoids telephone not being available for private use)
- They will need to be self-disciplined/they will need to organise own working day (avoid being disturbed by personal distractions)
- Set aside specific times for personal matters (avoid adding stress on the family) (2)

[14]

75 marks

SECTION C

QUESTION 8

- 8.1 8.1.1 Funding a project or venture by raising many small amounts of money from lots of people, mostly via the Internet. (3)
- 8.1.2 *Any ONE valid answer:*
- <www.kickstarter.com>
 - <www.gofundme.com>
 - <http://indiegogo.com>
 - <http://crowdfunder.com>
 - <http://rockethub.com>
 - <http://crowdrise.com>
 - <http://appbackr.com>
 - <http://angellist.com>
 - <http://invested.in>
 - <http://quirky.com>
 - <http://www.investmentnetwork.co.za>
- *Accept any other legitimate site (over 500 sites at present)*
- *Accept as correct just the domain name.* (1)
- 8.2 8.2.1 (a) (i) Used to supply electricity to the computer. (1)
- (ii) It does this by transforming electricity into a voltage that can be used by the computer system. (1)
- (b) (i) *Any ONE of:*
- Copper
 - Silver
 - Plastic
 - Gold
 - Dielectric
 - Conductive material
 - Non-conductive material
 - Soldering paste
 - Laminate (1)
- (ii) Used to mount the chipset and connections inside the computer (1)
- (c) (i) Secondary storage (1)
- (ii) Used to permanently store all the files and programs (1)
- (d) (i) Optical Drive (1)
- (ii) Used to read from and write to CDs and DVDs (1)
- 8.2.2 (a) CPU – Central Processing Unit
LCD – Liquid Crystal Display (2)
- (b) (i) CPU – used to control all the operations of the computer (1)
- (ii) LCD – used to output/display information from the computer (1)
- 8.2.3 The graphics capabilities are built into the motherboard. This can be seen in the motherboard specifications. (2)

- 8.3 8.3.1 Any **TWO** valid hardware devices:
- Scanner
 - Printer
 - Modem/Router
 - External Hard Drive
- (2)
- 8.3.2 Any **TWO** valid examples: (must match choice in Question 8.3.1)
- Scan recipes/photographs into the computer
- Print recipes/invoices/photographs
- Connect to the Internet
- For data backup
- (2)
- 8.4 No. Nigella owns the original recipes/Lebo cannot copy them without permission from Nigella. OR Yes. If Lebo has permission from Nigella. (2)
- 8.5 8.5.1 =E3 -D3 (accept correct variations) (2)
- 8.5.2 =IF(F3<0; 'Loss'; 'Profit') or comma is accepted (accept correct variations) (3)
- 8.5.3 Columns A, D and E. (3)
- 8.6 <head> <body> </table> </html> </p> Accept any 4 (4)
- 8.7 8.7.1 Any **ONE** valid site:
- | | | |
|------------------|-------------------|-----------------|
| • Archive.org | • Mefedia | • TroopTube |
| • Blip.tv | • Metacafe | • Tudou |
| • BlogTV | • Photobucket | • Tune |
| • Break.com | • Pixorial | • VBox |
| • Buzznet | • ReelTime.com | • Veoh |
| • Comedy.com | • RuTube | • Viddler |
| • Crackle | • Sapo | • Videodet |
| • DaCast | • SchoolTube | • Videojug |
| • Dailymotion | • ScienceStage | • Videolog |
| • EngageMedia | • Sevenload | • VideoPress |
| • ExpoTV | • SmugMug | • Vidoosh |
| • Facebook | • Tape.tv | • Vidyard |
| • Flickr | • Mevio | • Vimeo |
| • Fotki | • Mobento | • Vuze |
| • Funnyordie.com | • MUZU.TV | • Vzaar |
| • Funshion | • Myspace | • Wildscreen.tv |
| • GodTube | • MyVideo | • Wistia |
| • Hulu | • Nico Nico Douga | • Yahoo! |
| • Lafango | • OneWorldTV | • Youku |
| • LeTV | • Openfilm | • YouTube |
| • Liveleak | • Panopto | |
| • Mail.ru | • Trilulilu | |
- (1)
- 8.7.2 A video/item that is shared extensively by people over the Internet. (Much like a virus spreads) (2)

- 8.8 She can access the Internet using her smartphone and then tether/connect via Bluetooth the laptop to her smartphone OR create a hotspot using WiFi (radio waves) (2)
- 8.9 A template is a document where the basic structure has been laid out but no data has been entered. (2)
- 8.10 8.10.1 (a) No (1)
(b) Yes (1)
- 8.10.2 (a) *Any ONE valid example:*
- Controls all operations of computer
 - Process management
 - Printing management
 - Graphical User Interface
 - Memory management (1)
- (b) *Any ONE valid example:*
- Word processing
 - Spreadsheet
 - Database
 - Email
 - Desktop publishing
 - Presentations
 - Business administration (1)
- 8.11 8.11.1 applications software (1)
- 8.11.2 applications software (1)
- 8.11.3 system software (1)
- [50]

50 marks

Total: 150 marks