



NATIONAL SENIOR CERTIFICATE EXAMINATION
NOVEMBER 2013

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	C	(2)
	1.1.2	A	(2)
	1.1.3	F	(2)
	1.1.4	J	(2)
	1.1.5	I	(2)
1.2	1.2.1	Wiki	(1)
	1.2.2	RSS (Really Simple Syndication or Rich Site Summaries) feeds	(1)
	1.2.3	Downloading	(1)
	1.2.4	Hotspot	(1)
	1.2.5	Applications software OR Applications	(1)
	1.2.6	VoIP OR Skype	(1)
	1.2.7	(ISP) Internet Service Provider	(1)
	1.2.8	Homepage	(1)
	1.2.9	Web browser	(1)
	1.2.10	Digital or Authentication certificate	(1)
			[20]

QUESTION 2

2.1	D	(1)
2.2	C	(1)
2.3	C	(1)
2.4	B	(1)
2.5	D	(1)
2.6	A	(1)
2.7	B	(1)
2.8	A	(1)
2.9	B	(1)
2.10	D	(1)
		[10]

30 marks

SECTION B

QUESTION 3

3.1 The Hard Disk Drive is measured in Gigabytes (GB) while the RAM is measured in Megabytes (MB) 1 Gigabyte (GB) = 1024 Megabytes (MB) approx. ~ 1000 Megabytes (2)

3.2 *Choice* (This mark is only given if the reasons are correct and support the choice)
Any TWO valid reasons

Choice: Desktop (Figure 1)

Any TWO valid reasons:

- The speed of the CPU is faster so the desktop computer will execute processes more quickly.
- The monitor is larger for easier readability since Aunt Leah has weak eyes.
- The hard disk drive capacity is larger so more files can be stored as patterns take up much space.

OR

Choice: Laptop (Figure 2)

Any TWO valid reasons:

- *It is cheaper than the desktop*
- The laptop is mobile so she can use it at the shop and at home for example.
- The laptop contains a battery power source so if the electricity goes off, the computer can still be used.
- The laptop is smaller/more compact so it is easier for her to carry and although it has lower specs, is satisfactory for her requirements . (3)

(Either 3 or 2 marks, never 1 just for choosing)

3.3 Windows 7 Professional 32 bit (1)

3.4 *Any TWO valid functions:*

- Controls all the hardware of the computer
- Controls all the software of the computer
- Provides a GUI (Graphical User Interface) for the user to interact with the computer
- File management
- Resource management (memory allocation)
- Process management (2)

3.5 3.5.1 *Any ONE valid function:*

- Connect to another computer or network device, e.g. switch
- Connect to a network modem/router for Internet connection (1)

3.5.2 *Any ONE valid function:*

- VideoConferencing
- Take photographs
- Video phone calls, for example Skype. (Do not accept just Skype)
- Facial recognition for security purposes (1)

- 3.6 3.6.1 *Any ONE of:*
- Scanning device (including multi-function printer with scanner)
 - Handheld scanner
 - Flatbed scanner
- (1)
- 3.6.2 *Any ONE valid answer: (Do NOT accept brand names)*
- Scanning software
 - Word processing software (has scanning capabilities)
 - Any Office Suite that also has scanning capabilities
 - Publishing software (has scanning capabilities)
- (1)
- 3.7 *Any ONE valid package:*
- Microsoft Office
 - Corel Perfect Office
 - OpenOffice
 - LibreOffice
- Any ONE valid reason:*
- Can set up a template for the invoices in the word processor
 - Can set up a template for invoices with calculations in the spreadsheet
 - Can store the details of customers in a database
 - Can mail merge the database with the spreadsheet or word processor invoice
- (2)
- 3.8 3.8.1 DVD Drive
- (1)
- 3.8.2 *Any ONE of:*
- DVDs
 - Digital Versatile Disks
 - Digital Video Disk
- (1)
- 3.8.3 These drives use laser light to read/write the data.
- (1)

[17]

QUESTION 4

- 4.1 4.1.1 Any *TWO valid answers* (One mark each for naming and one mark each for the cause):
- Back OR neck OR muscle pain due to poor posture and/or equipment
 - Repetitive Strain Injury from continuous typing (Carpal Tunnel Syndrome)
 - Sore and itchy eyes / eye strain from concentrating for long periods of time on the monitor OR badly lit working environment
- (4)
- 4.1.2 Any *TWO valid answers* (Must match the problems from 4.1.1):
- Stand up and stretch regularly OR buy ergonomic equipment
 - Take regular breaks
 - Look up from the monitor regularly and focus on a far point or
 - Use an anti-glare device for sore/itchy eyes *ONLY* if the cause was a glare from the screen.
- (2)
- 4.2 4.2.1 Mail Merge (1)
- 4.2.2
- Create a data source (database/spreadsheet/table in wp) containing all the information (fields) of the companies to whom the introduction letter is to be sent.
 - Create a standard letter of introduction in a word processor (template).
 - Insert the correct information (fields) into the letter in the correct positions.
 - Run the mail merge facility. (Combine the database/spreadsheet information with the word processor document)
- (4)
- 4.3 4.3.1 (a) dots per inch (1)
- (b) pages per minute (1)
- 4.3.2 Yes I would recommend the printer Aunt Leah has large knitting patterns to print OR Aunt Leah has large poster advertisements to print OR Aunt Leah has many letters and/or invoices to print. (or printing A3)
- OR**
- No, I would not recommend the printer. The price of the printer is too expensive for a small business.
- The mark for Yes or No can only be allocated if there is some form of justification.*
- (2)
- 4.4 4.4.1 Wireless connection, no cable needed (using radio waves), but you will need a wireless modem/router to connect to. (2)
- 4.4.2 USB cable needed, but no extra hardware required OR Universal Serial Bus connection or port/hub Need a cable (2)

- 4.5 4.5.1
- | Problem | Solution |
|--|--|
| The Power Supply Unit (PSU) is faulty.
<p style="text-align: center;">OR</p> The computer is not plugged into the mains supply.
Or
The computer has not been switched on | Replace the PSU.
<p style="text-align: center;">OR</p> Plug the computer into the main supply.
Or
Switch the computer on |
| | |
- (2)
- 4.5.2
- | Problem | Solution |
|---|---|
| She has typed in the incorrect password.
Or
Caps Lock is on | Check that the caps lock key is not pressed.
<p style="text-align: center;">OR</p> Re-enter the correct password. |
- (2)
- 4.5.3
- | Problem | Solution |
|--|--|
| The memory of the computer is full.
<p style="text-align: center;">OR</p> The virtual memory of the computer has been manually set to a too low value. | Buy more RAM.
<p style="text-align: center;">OR</p> Reset the virtual memory to a higher value.
<p style="text-align: center;">OR</p> Allow the operating system to set the amount of virtual memory automatically.
Or close other programs running in the background (TSR) |
- (2)
- 4.6 4.6.1 A printer spooler is a software program that manages the order of files to be printed **OR** the queue of files to be printed. (2)
- 4.6.2 A printer buffer is hardware. It is memory that stores the files temporarily while they wait to be printed. (2)
- [29]**

QUESTION 5

- 5.1 5.1.1 To ensure that any data that is lost can be restored from the backup. (1)
- 5.1.2 These unwanted or temporary files build up over time and waste valuable storage space also slowing down the computer. (1)
- 5.1.3 The process of rewriting the files stored on the hard drive so that the different parts of files are located contiguously (next to each other) which makes accessing these files much faster. (2)
- 5.2 5.2.1 Any malicious software
Accept any of the following for the second mark:
- that infiltrates your computer to steal information
 - that does some form of damage to your computer
 - that affects the operation of your computer
- (2)
- 5.2.2 Anti-virus software compares all files on your computer against a database of known viruses. If a virus is found, then the file is either deleted, quarantined or cleaned. Since new viruses are continuously being written the database must be continuously updated. (3)
- 5.2.3 *Any ONE of:*
- Installing a firewall program.
 - ~~Installing an anti-malware program.~~
- (1)
- 5.3 5.3.1 *Any TWO valid answers:*
- Use 8 or more characters
 - Use a combination of numbers, letters (both uppercase and lowercase), symbols and punctuation
 - Use words that will only have relevance to Aunt Leah but would not be understood by anyone else
 - Avoid common password pitfalls such as dictionary words or personal information
- (2)
- 5.3.2 To ensure that her password and access remains secure (1)
- 5.4 5.4.1 *Any TWO valid answers:*
- Fake online auctions
 - Buy goods but never receive them
 - Bogus (ghost) sites that pretend you have earned money over the Internet
 - Identity theft
 - Fake business deals
 - Fake credit card offers
 - Bogus vacation prize offers
 - Phishing e-mails
 - Obtaining your personal banking details
 - A promise of free goods that never arrive
 - Pharming
- (2)

- 5.4.2 The URL or address of her website begins with https. When her website is accessed, there is a closed lock located on the toolbar of the web browser or a key symbol in the URL or the URL goes green. (2)
- 5.4.3 These websites set up an electronic wallet for the customer. They will pay any transactions the customer authorises instead of having to enter their financial details every time. (2)
- [19]**

QUESTION 6

- 6.1 6.1.1 *Any TWO valid answers.*
- If you turn it off, it will save power
 - Prevent wear and tear
 - Extend the working life of the hard drive (2)
- 6.1.2 Hibernating is an alternative to shutting down the computer. The operating system takes a 'snapshot' of the current state of all running programs and stores this information. The computer then powers down. When the computer restarts, the stored information restores the system to its previous point without having to do a full reboot. This saves time and power. (4)
- 6.2 If a device displays this logo, it uses less electricity to operate. Therefore you save electricity as well as money/or saving the environment. (2)
- 6.3 *Any THREE valid answers:*
- Only print those documents that have to be printed, store the rest electronically
 - Use recycled ink cartridges (cheaper or recycled paper)
 - Switch off the printer when not in use OR allow the printer to go into sleep mode when not in use
 - Print in grayscale instead of colour where possible (Print in B & W)
 - Shrink the printing to fit onto fewer pages
 - Print on both sides of the paper
 - Print only the selection of what you need
 - Use draft mode more than print quality mode (proofread before printing or onscreen) (3)
- 6.4 *Any TWO valid answers:*
- Send the used paper for recycling.
 - Make paper maché figurines and sell them. (re-use)
 - Use paper for an artwork.
 - Give only one mark for 2 examples of re-use or recycle (2)

- 6.5 6.5.1 The difference in knowledge and access to computer technology between those that do (The Haves) and those that do not (The Have Nots) (2)
- 6.5.2 *Any TWO valid answers:*
- Set up in-house training for employees
 - Send employees on training courses
 - Buy manuals for self-training
 - Give them access to technology. (2)
- [17]

QUESTION 7

- 7.1 7.1.1 The file is not actually deleted OR marked as deleted. . It is moved to the Recycle Bin (2)
- 7.1.2 Open the Recycle Bin and restore the file to its original location (2)
- 7.1.3 No, the file is permanently deleted. Only files on the hard drive of the computer have the option of being moved to the Recycle Bin. (2)
- 7.2 7.2.1 A software program used to locate information on the Internet based on entered key words. (3)
- 7.2.2 *Any TWO valid answers:*
- Google
 - Yahoo
 - Ananzi
 - Bing
 - AltaVista
 - Cuil
 - eXcite
 - allTheWeb
 - Galaxy
 - Ask
 - AOL Search
 - Live Search
 - Lycos
 - Gigablast
 - Alexa
 - Opera (2)
- 7.3 No, it is not legal. By purchasing the software, the worker has permission to run the game on one computer only.

OR

- Yes, as long as the worker purchased a multi-user licence for the game. (2)

7.4 7.4.1 The Google +1 button. It allows the user to recommend your content on Google Search and share it on Google+. (1)

7.4.2 The Facebook like button. The Like button lets a user share your content with friends on Facebook. (1)

7.5 Any *TWO* valid answers:

- Check that the date of publication of the website is current
- Make sure that the authors are well known in their fields
- Find supporting evidence from another website
- Make sure the website is reputable

(2)

[17]

QUESTION 8

- 8.1 A database is used for data manipulation not calculations while a spreadsheet is more suitable for calculations (formulae). (2)
- 8.2 Merge and Centre (1)
- 8.3 8.3.1 When Aunt Leah sorted the data, she only selected the surname column for sorting so the rest of the data was not sorted. (2)
- 8.3.2 Aunt Leah must either re-enter the data OR undo the sort. When repeating the sort all the columns must be selected even though the sort is on the surname only. (2)
- 8.4 8.4.1 *Any ONE of:*
- =CONCATENATE(LEFT(A2,3),RIGHT(B2,3))
 - =LEFT(A2,3)&RIGHT(B2,3)
- (3)
- 8.4.2 *Any ONE of:*
- Auto fill
 - Copy and paste
 - Copy Down
- (1)
- 8.5 *Any ONE of:*
- vlookup
 - lookup.
- (Do NOT accept hlookup.) (1)
- 8.6 nested if (If within an If) (1)
- 8.7 8.7.1 Absolute cell referencing is used to freeze (lock on, fixed) a cell reference into a formula so that when you autofill a column, the cell reference will not change. (2)
- 8.7.2 *Any ONE of:*
- Only the column of the medical aid deduction will remain unchanged when autofilling.
 - The row of the medical aid deduction will change when autofilling.
 - The incorrect cell will be used for the medical aid deduction when autofilling.
 - The final value of the medical aid deduction will be incorrect
- (1)
- 8.8 8.8.1 A pie graph (chart) would be chosen since it shows the percentage contribution of each worker to the whole as a slice of the pie. (2)
- 8.8.2 The Surname column (column B) or StaffId (Column C) and the Final Weekly Wage column (column K) (2)
- 8.9 Password protect the opening of the file or encrypt the file. (1)
- [21]

120 marks

Total: 150 marks