



NATIONAL SENIOR CERTIFICATE EXAMINATION
SET B 2024

COMPUTER APPLICATIONS TECHNOLOGY: PAPER II

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 ✓
- 1.1.2 C ✓
- 1.1.3 B ✓
- 1.1.4 A ✓
- 1.1.5 A ✓
- 1.1.6 C ✓
- 1.1.7 D ✓
- 1.2 1.2.1 JPG ✓
- 1.2.2 Blogs ✓
- 1.2.3 Speech to text ✓
- 1.2.4 size ✓
- 1.2.5 C3:C30 ✓

QUESTION 2

- 2.1 2.1.1 E ✓
- 2.1.2 A ✓
- 2.1.3 O ✓
- 2.1.4 H ✓
- 2.1.5 N ✓
- 2.1.6 J ✓
- 2.1.7 F ✓
- 2.1.8 G ✓

- 2.2 2.2.1 HDMI ✓
- 2.2.2 RSI ✓
- 2.2.3 HTTPS ✓
- 2.2.4 AUP ✓
- 2.2.5 ROM ✓

SECTION B

QUESTION 3 SYSTEM TECHNOLOGIES

3.1	Question number	Name of hardware/software	Main function
	3.1.1	Smartwatch ✓ (1)	A watch that acts like a smartphone that gives notifications of apps. ✓ OR A watch that can be used to answer phone calls or messages. ✓ OR A watch that can be connected to a smartphone. ✓ (Any suitable answer that indicates that it can be used like a smartphone) (1)
	3.1.2	Chatbot ✓ (1)	Pre-programmed software to answer questions without the need of a human operator. ✓ OR AI that understand customer questions and automate responses to them. ✓ (Any suitable answer that explains a service provided without human interaction) (1)
	3.1.3	3D Printer ✓ (1)	To print three-dimensional objects ✓ OR Create 3D objects with a variety of materials ✓ (Any suitable answer that indicates that it prints 3D objects) (1)
	3.1.4	CMOS battery ✓ (1)	Provides power for the BIOS when the computer is switched off. ✓ OR The CMOS battery is responsible for keeping track of the computer's time and date systems.. ✓ OR If your CMOS battery is not working your computer will have problems booting up. ✓ (Any suitable answer that indicates it provides power to certain settings in the computer) (1)

3.2 3.2.1 RAM (memory) ✓
CPU (processor)✓

3.2.2 Smaller in capacity ✓
More expensive✓
(Also accept: advantages of HDD. E.g. HDD has higher capacity for cheaper prices)

- 3.3
- Microphone
 - Touch screen
 - Touchpad
 - Wireless interface controller/card
 - Gyroscope/Accelerometer
 - Digital compass
- (Any **TWO** of the above) ✓✓
- 3.4
- Is standard on most mobile devices, can share chargers/connectors
 - Takes up less space/Device can be made smaller/thinner
 - Allows you to transfer data between an older device
- (Any **TWO** of the above) ✓✓
- 3.5
- An entry level CPU has enough processing power for a personal user ✓
 - It would be an unnecessary expense to get a more powerful CPU that is used to capacity ✓
- 3.6
- 3.6.1 Inches ✓
- 3.6.2 The size of a monitor is measured diagonally across the screen from corner to corner. ✓
- 3.7
- 3.7.1 A program used to let certain programs run at specific times. ✓
- 3.7.2
- Type of file, i.e. file extension
 - Text within file
 - File size
 - Date created
 - Author, etc.
- (These are the most common. You can search on any property that appears in the file list headings in Windows Explorer (Details view))**
- (Any **TWO** of the above) ✓✓
- 3.7.3 Ctrl+Alt+Del ✓
- Most often used to end a program that is not responding. ✓

QUESTION 4 INTERNET AND NETWORK TECHNOLOGIES

- 4.1 WWW is a service on the internet which is a collection of hyperlinked, interactive documents that the user can access. ✓
- 4.2
- Bandwidth/speed of connection should be high
 - Wide network coverage
 - Whether there are capped and uncapped offerings
 - Throttling of your connection
 - The services that are offered by the ISP
 - Reputation of the ISP
 - Whether data is carried over into the next month
 - Whether the ISP offers an antivirus facility
 - Whether the ISP is known for a stable connection etc.
- (Any **TWO** of the above) ✓✓
- 4.3
- Connects a computer to the internet(Accept reference to data)
 - Create a network/Has the functionality of a switch
 - Offers certain services of a server for network connectivity/It acts as a server
 - Provides security to the network, e.g. a firewall
- (Any **TWO** of the above) ✓✓
- 4.4
- Add a wireless connection/Access Point ✓
 - Add a switch ✓
- 4.5 Client computer uses resources ✓ Network server provides resources ✓
/Server is not used as a workstation.
- 4.6 4.6.1 Capped ✓
- Limited to 50GB per month ✓
- 4.6.2 Throttling ✓
- 4.6.3
- Quality of the modem/router/Speed specification of the wireless router
 - The computer might be slow
 - Network traffic is high
 - Physical barriers
 - The type of cable used
 - The capacity the ISP allows per user is low
 - Distance between the computer and the server of the ISP
- (Any **TWO** of the above) ✓✓

QUESTION 5 INFORMATION MANAGEMENT

- 5.1 A search engine is a program that searches the Web for web pages relevant to the keywords or ✓ phrases entered by the person looking for information. The search results are usually presented in a list and are commonly referred to as hits. ✓
- 5.2 Search without the quotation marks will try to match either of the words. ✓ By adding the quotation marks, the search will match the whole phrase (both words) and therefore will return fewer results. ✓
- 5.3
- use a more precise search phrase or use synonyms
 - exclude certain words from the search by using Boolean operators
 - use the search engine operators
 - specify date ranges, file types, etc
- (Any **ONE** of the above) ✓
- 5.4 **INPUT:**
Programme the area to clean
Programme the time to go on and off
Programme the type of cleaning that needs to happen
Programme when to go back to charging dock
(Any **ONE** of the above) ✓
- PROCESSING:**
At the appropriate time the vacuum cleaner will go to the areas it needs to clean
At the time programmed it will switch on and go off
Will clean according to programmed instructions
When the battery is low it will go to charge
(Any **ONE** of the above) ✓
- OUTPUT:**
The vacuum cleaner will either be busy cleaning or on charge when Thomas gets home.
Area will be clean/vacuumed
- 5.5 ID number or Passport number
Customer Order/Invoice Number
(Any **ONE** of the above) ✓✓
- 5.6
- Not enough quality control
 - Information gets outdated
 - Information is often subjective and one-sided/biased
 - Anyone can post information online even though not a specialist
- (Any **ONE** of the above) ✓

QUESTION 6 SOCIAL IMPLICATIONS

- 6.1 Plagiarism ✓
 Free software ✓
 Freeware ✓
 Shareware ✓
 Ethics ✓
- 6.2 Yes, ✓
 Pharming is when you are taken to a fake website, ✓ from the original
 website, without being aware of it. ✓
- 6.3 Single-step authentication: Where a user is required to enter a username and
 password to gain access. ✓
 Multi-step authentication: A second or third step of authentication is required
 like biometric data, one-time pins, answers to predetermined questions, etc.
- 6.4 A card skimming device reads the magnetic stripe on your credit or debit card
 when you slide it into a card reader. ✓ The skimmer then stores the card
 number, expiration date and cardholder's name. ✓
- 6.5 Shoulder Surfing: Looking over someone's shoulder while entering sensitive
 information, such as password, to gain access to the information. ✓
- Trojan Horse: Software that appears to be useful but will cause damage once
 it is installed. ✓

QUESTION 7 SOLUTION DEVELOPMENT

- 7.1 Attributes are extra properties ✓ that are added in the opening tags. ✓
Examples are colours, alignments, sizes, etc.
(Any **ONE** of the above) ✓

7.2

Heading 1		
Heading 2	Items	
	Data 1	Data 2
	Data 3	Data 4

Mark distribution:

- (1) 1st row Merged (Heading 1) ✓
 - (2) Heading 2 Merged across 3 rows ✓
 - (3) Items merged across 2 columns ✓
 - (4) Data entered correctly ✓
- 7.3 7.3.1 VLOOKUP ✓
Combination of MATCH and INDEX ✓
(Any **ONE** of the above) ✓
- 7.3.2 Use absolute cell referencing ✓ /Use the \$ sign/Press the F4 key
- 7.3.3 Ensure that STOCK table includes all codes, for example. 121. ✓
OR
Sort the data and use the true range ✓
- 7.4 What You See Is What You Get: it is web design tools ✓ that allow you to drag and drop and type the same way you would in a text processor. ✓
OR
Allows you to visually edit your content in a form without writing any code. ✓

SECTION C

QUESTION 8 INTEGRATED SCENARIO

- 8.1
- Efficiency / cost savings (computers save time / labour /resources)
 - Accuracy (Calculations are done 100% correct)
 - Reliability (unlike human beings who get tired, sick, bored, etc.)
(Any **TWO** of the above) ✓✓
(Accept specific examples, but only related to use of computers in business)
(NOT: usefulness in communication (part of question))
- 8.2
- 8.2.1 A drone is an unmanned aerial vehicle ✓ that flies above the ground and that is not piloted. ✓
- 8.2.2
- Drones can monitor dangerous or hard-to-reach places
 - They are becoming more economical to buy which can save costs compared to buying other types of equipment
 - Can take high-quality photographs and videos
 - A drone can be guided to a precise location
 - It is easy to deploy and control
 - Saves time. Maintaining land, crops, stables and livestock is hands-on work, and that can take a lot of time
(Any **TWO** of the above) ✓✓
- 8.3
- Laptops can be locked away/security
 - Battery can allow use during power outages/away from power source
 - Consumes (generally) less power
 - Mobility makes it easy to set up or to be used for different purposes on the farm
 - All parts are incorporated into a single device (no need for extra devices)
(Any **TWO** of the above) ✓✓
- 8.4
- 8.4.1 Primary Memory / RAM✓
- 8.4.2
- PCs will be more capable of handling demanding applications/To meet minimum system requirements of more apps
 - Able to open more applications at the same time
 - Improved overall performance
 - Could be used for a longer period before needing to upgrade/replace
(Any **TWO** of the above) ✓✓
- 8.5 An eSATA port connects to external drives like hard disk drives (HDDs) or optical drives with an eSATA cable ✓

- 8.6 8.6.1 • Easier/Quicker to capture information
- Additional information from a database may be available
 - There will be a record of barcodes scanned for later reference
 - Information/Data will be more accurate
- (Any **TWO** of the above) ✓✓

8.6.2 Smart device e.g. smartphone, tablet, phablet ✓

8.6.3 Biometric data ✓

8.7 3G/LTE/4G/Cellular/Satellite✓

Motivation:

Farmers might want to be connected at different points on the farm ✓ and therefore will need mobile internet communications.

8.8 8.8.1 Place the devices very close to each other/Let the devices touch each other.✓

- 8.8.2 • Transfer files/media
- Making payments
 - Identification/Security
 - Initiate an action/Launch an app
- (Any **TWO** of the above) ✓✓

8.9 • Battery life is depleted quicker

- Overall internet experience is slower
- Data CAP may deplete quicker/Data costs may increase

(Any **TWO** of the above) ✓✓

8.10 USSD code ✓

QUESTION 9 INTEGRATED SCENARIO (continued)

9.1 9.1.1 Used the space bar/Spaces were used ✓

- 9.1.2 • Tabs
 • Tables
 • Columns
 (Any **TWO** of the above) ✓✓

- 9.1.3 • Use the ruler
 • Use the paragraph dialog box/Indentation option in paragraph dialog box
 • Use a tab dialog box
 • Use a style
 • Use the Increase Indent/Decrease Indent button on the ribbon
 (Any **TWO** of the above) ✓✓

- 9.1.4 • Prevent formatting changes (Read-Only)
 • Force all changes to be tracked
 • Allow comments only
 • Allow only the filling in of the form
 • Limit formatting to a selection of styles
 (Any **TWO** of the above) ✓✓

9.2 9.2.1 **Field:** The smallest unit of data, each fact would be stored in a field. ✓
 Record: A collection of fields that includes the particulars of a specific entity. ✓

9.2.2 Data type is number/Data type is not text and a 0 in front of the number does not have any meaning. ✓

9.2.3 Change the data type to text. ✓

- 9.2.4 • Cannot only use surname e.g. in a query ✓
 • Difficult to add information accurately ✓
 • Cannot do effective data validation ✓

9.3 9.3.1 • Attach the data to an e-mail/WhatsApp/SMS/MMS/Fax
 • Provide access/send a link to the data in a folder on a shared drive
 • Provide the district office with an electronic storage medium that contains the data
 • Upload data to a central database (via an app)
 (Any **TWO** of the above) ✓✓

- 9.3.2
- Input Masks
 - Validation rules and text
 - Default value
 - The use of list boxes/combo boxes
- (Any **TWO** of the above) ✓✓
- 9.4
- 9.4.1
- It can also be used for scanning, copying, faxing, etc.
 - Saving costs as you do not need to buy items separately
 - Saving workspace as all devices are combined into one
- (Any **TWO** of the above) ✓✓
- 9.4.2
- Print two (or more) pages per single sheet of paper
 - Select which pages to print (i.e. not always necessary to print all pages in range)
 - Change paper orientation / size / margins
- (Any **ONE** of the above) ✓
- 9.4.3
- Printer could be connected to network wirelessly (thus easy to reposition printer in room, and no need for cables or USB ports). ✓
- 9.5
- Videos that are shared on social media that are up to 30 seconds ✓and include music, effects, and other creative elements. ✓
- 9.6
- The screen and keyboard cannot be adjusted individually.
 - The screen and keyboard areas are connected which means that proper monitor height and keyboarding hand positions cannot be set independently.
 - Setting up your laptop incorrectly negatively effects your posture
 - The use of a touchpad may have more strain on your hand compared to an ergonomically designed mouse.
- (Any **TWO** of the above) ✓✓

Total: 150 marks