basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

SENIOR CERTIFICATE EXAMINATIONS/ NATIONAL SENIOR CERTIFICATE EXAMINATIONS

COMPUTER APPLICATIONS TECHNOLOGY P2

MAY/JUNE 2026

MARKS: 150

TIME: 3 hours

This question paper consists of 18 pages.

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INSTRUCTIONS AND INFORMATION

1. This question paper consists of:

   SECTION A (25)
   SECTION B (75)
   SECTION C (50)

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 sub question.

7. Generally, one mark is allocated per fact; therefore, a 2-mark question would require TWO facts, etc.

8. Read the questions carefully. Do NOT give more answers than the question requires as it will NOT be marked.

9. All answers MUST be related to Computer Applications Technology.

10. Unless otherwise specified, answers such as 'cheaper', 'slower'/'faster', etc. will NOT be accepted.

11. Do NOT use brand names in your answers, unless specifically required.

12. Write neatly and legibly.

SECTION A

QUESTION 1: 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 numbers (1.1 to 1.10) in the ANSWER BOOK, e.g. 1.11 D.

1.1 What is the role of the CPU in a computing device?

A To store data permanently
B To execute all instructions
C To connect to the printer
D To display data on a monitor (1)

1.2 Which ONE of the following is classified as an accessory program included with the operating system?

A Remote Desktop
B Defragment
C Task Manager
D Calculator (1)

1.3 Which ONE of the following is NOT a characteristic of an embedded computer?

A It performs a dedicated function.
B It can be easily upgraded like a PC.
C It is often found in home appliances.
D It is designed for real-time operations. (1)

1.4 Evaluating the design of a website refers to …

A who the website is intended for.
B website content that is current.
C easy navigation of the website.
D the credibility of the website author. (1)

1.5 Which ONE of the following can be included in the metadata of a file?

A The summarised contents of a document
B The description of all the images used
C The different fonts used in the document
D The number of pages in the document (1)

1.6 Which wireless technology is most often used for connecting devices to the internet?

A Wi-Fi
B Bluetooth
C NFC
D Infrared (1)

1.7 ONE purpose of cloud computing is to …

A ensure all data is stored only on personal devices.
B eliminate the need for security measures in computing.
C provide online access to server-based resources.
D force the user to have additional hardware expenses. (1)

1.8 Which ONE of the following is NOT an example of processing data in a spreadsheet?

A Using locked cells to safeguard data
B Using functions and formulae in cells
C Creating graphs to represent data
D Using conditional formatting on cells (1)

1.9 An alternative to the CONCATENATE function in a spreadsheet:

A #
B @
C %
D & (1)

1.10 Which ONE of the following entries will display an error message if the validation rule **Like "*@*.*"** has been set in a database table?

A school@mail.com
B www.techy@augov
C @mail.co.za
D findept@icloud.net (1)
[10]

QUESTION 2: MATCHING ITEMS

Choose a term/concept from COLUMN B that matches the description in COLUMN A. Write only the letter (A–T) next to the question numbers (2.1 to 2.10) in the ANSWER BOOK, e.g. 2.11 U.

COLUMN A		COLUMN B	
2.1	A spreadsheet function used to calculate totals based on multiple criteria	A	PDF
2.2	This type of software requires a paid subscription and licence agreement	B	digital footprint
2.3	Processed data ready for analysis	C	webcam
2.4	An integrated audio device in a notebook computer for communication purposes	D	bandwidth
2.5	A permanent record of your online activities and interactions	E	=SUMIFS
2.6	A technology that converts a scanned image of text into editable text	F	proprietary software
2.7	An optical storage medium that holds high-definition multimedia files	G	Blu-Ray Disk
2.8	The amount of data that can be transferred from one point to another in any given time	H	emoticons
2.9	A field property in a database that automatically displays a value for every new record	I	=SUMIF
2.10	Images used to indicate a mood or feeling in a digital message	J	open-source software
		K	broadband
		L	knowledge
		M	AutoNumber
		N	information
		O	microphone
		P	browsing history
		Q	OCR
		R	default value
		S	flash drive
		T	icons

(10 x 1) **[10]**

QUESTION 3: TRUE/FALSE ITEMS

Indicate whether the following statements are TRUE or FALSE. Write 'true' or 'false' next to the question numbers (3.1 to 3.5) in the ANSWER BOOK. Correct the statement if it is FALSE by changing the underlined word(s) to make the statement TRUE. (Do NOT simply use the word 'NOT' to change the statement.)

NO mark will be awarded if FALSE is written without a correct answer.

EXAMPLES:

QUESTION	ANSWER
A stylus can be used for more accurate input on some touch screens.	True
The World Wide Web is characterised by unequal access to ICT by different groups of people.	False, digital divide

3.1 An NIC has slots for hardware components, such as the CPU. (1)

3.2 Theft of time refers to the use of a company's resources for private use that is not authorised by the company. (1)

3.3 In a research report, the task definition is a brief summary of the report. (1)

3.4 The type attribute in HTML provides a description of an image that cannot be displayed in the browser. (1)

3.5 The internet is a collection of web pages only available to employees on a local network within a company. (1)
[5]

TOTAL SECTION A: 25

SECTION B

QUESTION 4: SYSTEMS TECHNOLOGIES

4.1 Define the concept *Graphical User Interface* (GUI) AND indicate TWO GUI features that are often used. (3)

4.2 Name TWO specialised input devices for users who are physically challenged. (2)

4.3 Understanding the role of software in computing is essential for efficient system performance.

4.3.1 Which software enables communication between system software and peripherals? (1)

4.3.2 Describe the process of plug-and-play. (2)

4.3.3 What type of software is Disk Cleanup? (1)

4.3.4 Indicate TWO ways in which Disk Cleanup is used to free up disk space. (2)

4.4 Software must be activated to enable all available features.

Name ONE way how newly installed software can be activated. (1)

4.5 Discuss TWO actions a user can take when a software bug is encountered. (2)

4.6 What is the function of ROM in a computer system? (1)

4.7 Name TWO types of output (not devices) in the information processing cycle. (2)

4.8 Name TWO factors you should consider when purchasing a scanner. (2)

4.9 When you open the printer queue dialog box, name TWO options or actions that you can perform from this dialog box. (2)

4.10 Modern computers make use of multi-core processors.

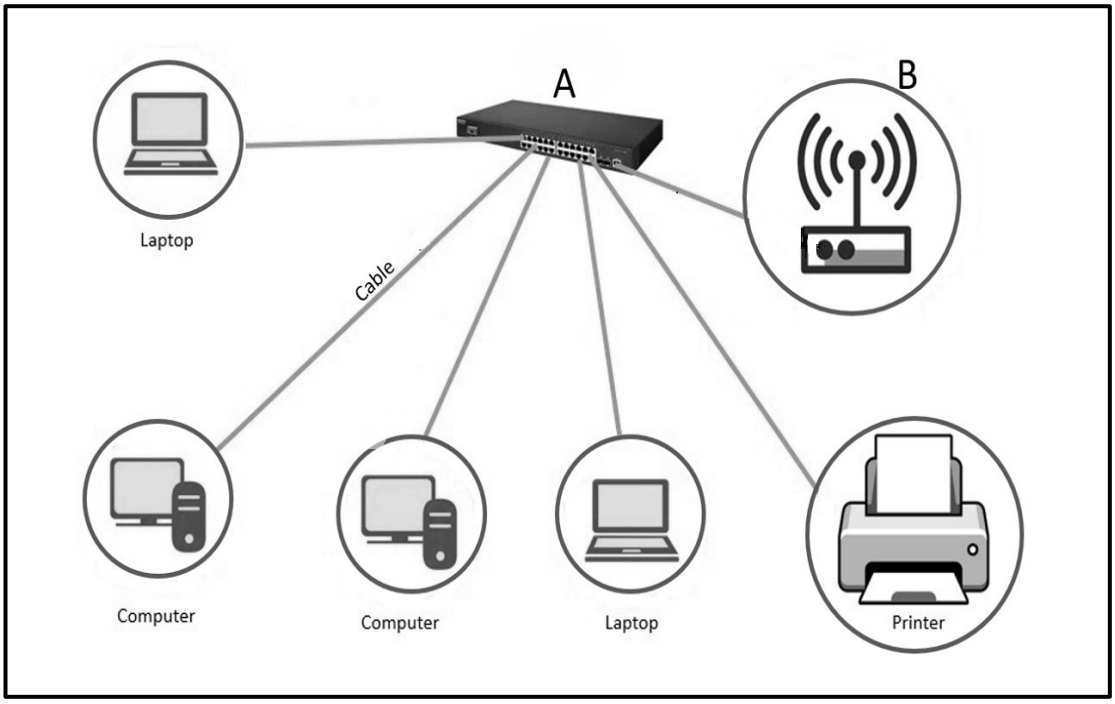
4.10.1 Explain what a *multi-core processor* is. (1)

4.10.2 How does a multi-core processor improve the performance of a computing device? (1)

4.11 Discuss TWO disadvantages of a 3D printer. (2)
[25]

QUESTION 5: INTERNET AND NETWORK TECHNOLOGIES

5.1 Study the diagram below and answer the questions that follow.



5.1.1 Name network components **A** and **B** in the diagram. (2)

5.1.2 Which integrated component is needed to connect the cable to the computers? (1)

5.1.3 Why would a user prefer a wired cable connection for all devices as illustrated in the diagram? (2)

5.2 Explain EACH of the following concepts:

5.2.1 Web browser (1)

5.2.2 Search engine (1)

5.3 In addition to basic internet access, name TWO other services provided by an ISP. (2)

5.4 Name the process whereby multiple computers share their processing power to solve a complex problem AND give an example of where this can be used. (2)

5.5 Describe the concept *web caching* AND explain how it impacts the efficiency of a web browser. (2)

5.6 A pop-up blocker blocks unwanted pop-ups and advertisements.

Discuss TWO other benefits of using a pop-up blocker. (2)
[15]

QUESTION 6: INFORMATION MANAGEMENT

6.1 Give TWO examples of good file management practices. (2)

6.2 Give ONE reason for using section breaks in a large research document. (1)

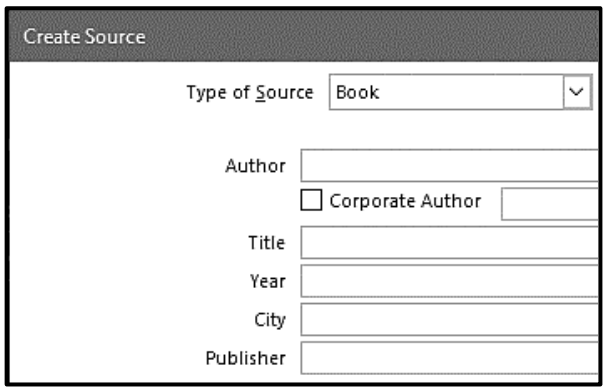
6.3 Give TWO tips a user can follow to avoid unwanted information while doing research. (2)

6.4 Name ONE characteristic of a good focus question. (1)

6.5 Why would a user choose to create a query rather than a filter to extract information from a database table? (1)

6.6 Give TWO reasons why an index needs to be included in a research project. (2)

6.7 Name ONE word processing feature that can be used after information is captured using the dialog box below.



(1)
[10]

QUESTION 7: SOCIAL IMPLICATIONS

7.1 Explain what the Fifth Industrial Revolution (5IR) is. (2)

7.2 Discuss TWO ways in which cyber criminals can disrupt or damage computer systems. (2)

7.3 Name TWO ways in which ICT systems can reduce an organisation's financial expenses. (2)

7.4 Give TWO reasons why it is important to ensure accuracy and validity of data in a database of an organisation. (2)

7.5 How can blockchain technology benefit users in the e-commerce sector? (2)
[10]

QUESTION 8: SOLUTION DEVELOPMENT

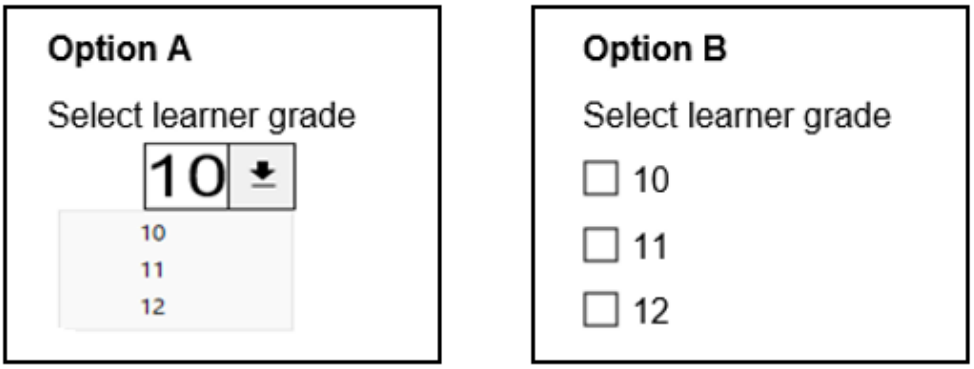
8.1 How can you ensure the date appears automatically at the top of every page each time the document is opened? (2)

8.2 Except for deleting a heading, how would you exclude a heading from an automatic table of contents? (1)

8.3 Give ONE example of a data source you can use to create mail merge documents. (1)

8.4 An electronic word processing document was sent to schools to enrol learners for an Olympiad.

Which of the options below, designed using form fields, will eliminate human errors when selecting the grade of the learner? Motivate your answer.



(2)

8.5 A database, containing a table and a report, stores Grades 10 to 12 learner information.

Which feature in the database report was used to ensure that all the learners from the same district were placed together?

District	Surname	Name	Grade	School
Central				
	Banjana	Emma	11	Central High
	Brown	John	10	Central High
	Buys	Sarah	11	Central High
	Swanepoel	Hannes	10	Central High
North				
	Letaba	Mary	10	North View High
	Ngobeni	Sam	11	North View High
South				
	Louw	Emily	12	Eastside Academy
	Pelo	Daniel	12	Southridge School
West				
	Hassin	Olivia	10	West High School
	van Tonder	Michael	12	West High School

(1)

8.6 The following HTML code appears in an HTML editor:

```
<font type = "Calibri" size = "7"> </font>ATHLETIC MEETING
```

The text '*ATHLETIC MEETING'* does not display as expected in the browser.

Identify the TWO errors in the HTML code. (2)

8.7 Why would you use the <p> tag in HTML coding as an alternative to the <br/> tag? (1)

8.8 Give TWO reasons why you should include comments in an HTML file. (2)

8.9 When would you make use of a nested IF statement in a spreadsheet? (1)

8.10 Examine the spreadsheet below. The formula in **cell D5** results in **0.2** which is incorrect.

Modify the formula in **cell D5** to show the number of hours travelled on Wednesday.

	A	B	C	D
1	Number of hours travelled per day			
2	**Day_Dag**	**StartTime_BeginTyd**	**EndTime_EindTyd**	**HoursTravelled_ReisUre**
3	Monday	08:00	12:00	4.0
4	Tuesday	08:15	11:15	3.0
5	Wednesday	09:35	14:00	=C5-B5
6	Thursday	12:22	16:52	4.5
7	Friday	11:25	11:55	0.5

(2)
[15]

TOTAL SECTION B: 75

SECTION C

QUESTION 9: INTEGRATED SCENARIO

Your school has established a youth club for high-school learners in the community. The club provides a safe space for learners to collaborate and develop computer-based skills. The school has made a venue available where a network can be set up using five donated desktops and other computing devices.

9.1 Study the computer specifications of one of the donated computers below and answer the following questions.

Intel Celeron N3350 2.4 GHz 4 GB DDR4 120 GB SSD 600 Mb/s Linux: Ubuntu 20.04 LTS Integrated optical drive nVidia GT525 graphics Libre Office 25.8

9.1.1 Give the memory size of this computer. (1)

9.1.2 Indicate the speed of the processor. (1)

9.1.3 What is the name of the operating system on this computer? (1)

9.1.4 Name TWO disadvantages of the installed software. (2)

9.2 The printer in the venue was damaged and a new donated printer was connected to the network.

9.2.1 Name TWO ways to responsibly discard the old damaged printer. (2)

9.2.2 Some learners are able to use the new printer, while others cannot print.

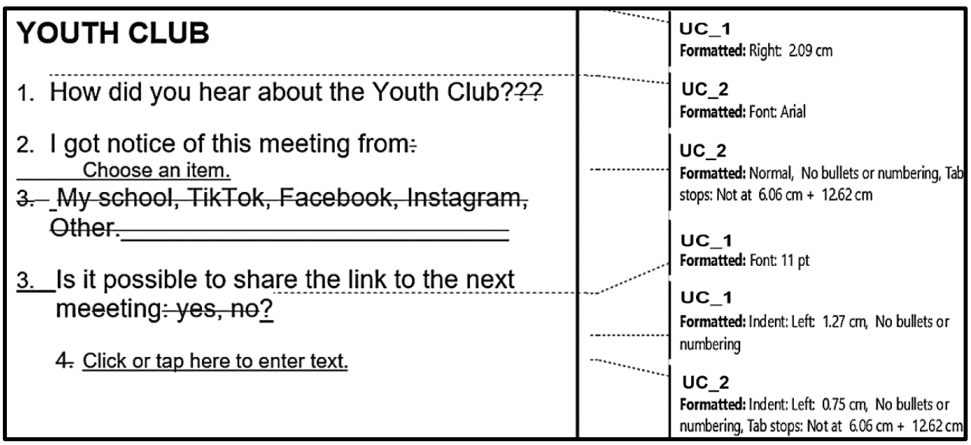
Give TWO solutions to resolve the problem. (2)

9.3 Learners will attend the opening meeting of the youth club. A presentation will highlight the club's goals and objectives. The presentation displays only on the computer monitor, not on the projector.

Identify TWO possible reasons why the projector does not display the presentation. Assume that there are no problems with the projector. (2)

9.4 The youth club created an electronic survey to obtain information on how learners heard about the club.

9.4.1 The word processing document below was reviewed by two different learners.



(a) Which word processing feature was used to review the document? (1)

(b) State ONE benefit of using this word processing feature. (1)

9.4.2 Discuss TWO advantages of using an online survey. (2)

9.5 A database was created to capture learner information.

ID	Name	Surname	CellNo	School	Grade	Smartphone	Internet at home
1	John	Brown	0824560983	Central High	10	yes	no
2	Mary	Letaba	0628473368	North View High	9	yes	yes
3	Sam	Ngobeni	0787373840	North View High	11	no	yes
4	Emily	Louw	0638937633	Eastside Academy	12	yes	no
5	Michael	van Tonder	08274KLMN	West High School	12	yes	no
6	Sarah	Buys	0983738983	Central High	11	yes	yes
7	Hannes	Swanepoel	0974363833	Central High	10	no	yes
8	Olivia	Hassin	0962347644	West High School	10	no	no
9	Daniel	Pelo	0963547333	Southridge School	12	yes	no
10	Emma	Banjana	0725638829	Central High	11	yes	yes

9.5.1 Name ONE change that can be made to the field properties of the ***CellNo*** field to prevent the mistake in the 5th record. (1)

9.5.2 The query below was created to list all Grade 11 learners.

Field:	Name	Surname	Grade	School
Table:	Youth_Club	Youth_Club	Youth_Club	Youth_Club
Sort:				
Show:	✓	✓	✓	✓
Criteria:			>="11"	
or:				

Give ONE reason why the desired results are not given. (1)

9.6 The youth club is responsible for their own internet connectivity. They signed a contract with an ISP.

9.6.1 Describe TWO disadvantages of using an ISP e-mail as opposed to a free web-based e-mail. (2)

9.6.2 Discuss TWO reasons why the youth club decided on a shaped internet connection. (2)

9.7 The youth club decided to create a *Facebook* page to publish the meeting dates and other relevant information.

Describe TWO safety measures to consider when creating a social media account. (2)

9.8 Discuss TWO negative impacts social networking sites can have on the learners of the youth club. (2)
[25]

QUESTION 10: INTEGRATED SCENARIO

A group of teenagers recently joined a local gym to stay fit and healthy. Peter, the gym instructor, assists new members with the sign-in process on the gym app.

10.1 They installed the gym app using a QR code onto their smartphones, which allows them to log their exercise routines, set goals, receive reminders and track their progress.

10.1.1 What is *two-factor authentication*? (2)

10.1.2 Discuss TWO reasons why it is important to read the licence agreement before accepting the terms and conditions of the gym app. (2)

10.1.3 Give ONE reason why the gym app might not install on certain mobile devices. (1)

10.2 The gym also sells wearable devices that can synchronise with the gym app.

10.2.1 Name any TWO wearable devices that can synchronise with a fitness app. (2)

10.2.2 What does *synchronise* refer to in this scenario? (1)

10.2.3 What type of network allows for a wearable device to connect to a smartphone? Motivate your answer. (2)

10.3 A point of sale (POS) system is used at the health shop in the gym.

10.3.1 Which device of the POS system can be used as both input and output? (1)

10.3.2 Explain how a POS system retrieves the price of a product after it is scanned. (2)

10.4 A pin code is currently used to gain access to the gym.

10.4.1 Indicate how upgrading to biometric authentication will improve security. (1)

10.4.2 Identify TWO different biometric devices that can be used in this environment. (2)

10.5 The gym has smart treadmills with machine learning capabilities. These treadmills collect data, such as users' heart rates, running speeds and step lengths.

Explain how machine learning will benefit the user in this scenario. (2)

10.6 One of the members of the gym found the following sources regarding fitness goals.

Source A: A personal blog with no author details **Source B:** An official online fitness website managed by health professionals

Which source is the most reliable source? Motivate your answer. (2)

10.7 Peter created the following spreadsheet to illustrate trends in fitness levels and quality of life score gained by members.

	A	B	C	D
1	**Age Group**	**Average Weekly Exercise (Hours)**	**Average Fitness Level (%)**	**Quality of Life Score (1-10)**
2	18-25	6	85	9
3	26-35	5	78	8
4	36-45	4	70	7
5	46-55	3	60	6
6	56-65	2	50	5
7	66+	1	35	4
8	**#DIV/0!**	**3.5**	**63**	**6.5**

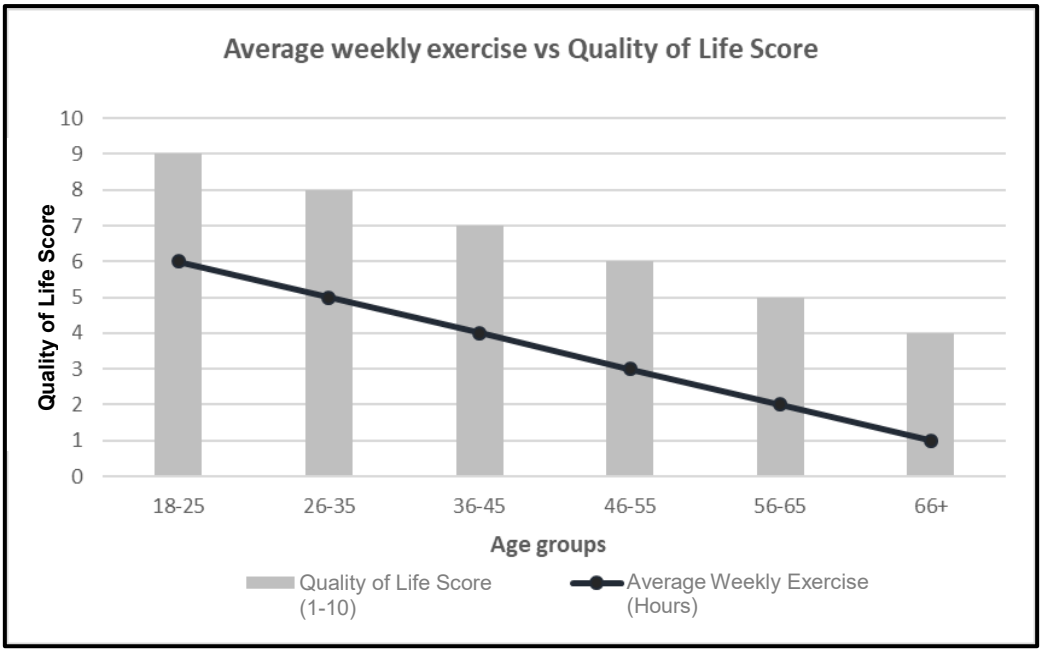
10.7.1 The averages were calculated in **row 8**.

Explain why the division by zero error message appears in **cell A8** AND give a recommendation to resolve this problem. (2)

10.7.2 The result in **cell D8** is a decimal number.

Recommend ONE change to the function in **cell D8** to display 7 as the answer. (1)

10.7.3 Based on the chart below, what conclusion can be made about the relationship between the average weekly exercise and the quality of life score?



(2)
[25]

TOTAL SECTION C: 50
GRAND TOTAL: 150

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