



higher education  
& training

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Department:  
Higher Education and Training  
**REPUBLIC OF SOUTH AFRICA**

N310(E)(J6)H

**NATIONAL CERTIFICATE**

**DATA MANAGEMENT: FARMING N6**

(4090476)

**6 June 2019 (X-Paper)**

**09:00–12:00**

**25 MINUTES BEFORE THE COMMENCEMENT OF THE EXAMINATION THIS  
QUESTION PAPER SHOULD BE HANDED TO THE CANDIDATES  
TO READ THE INSTRUCTIONS**

**Candidates may bring a typing ruler, a dictionary and a list of ASCII codes  
into the examination room.**

**This question paper consists of 19 pages.**

**DEPARTMENT OF HIGHER EDUCATION AND TRAINING**  
**REPUBLIC OF SOUTH AFRICA**  
NATIONAL CERTIFICATE  
DATA MANAGEMENT: FARMING N6  
TIME: 3 HOURS  
MARKS: 200

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**TURN THE PAGE FOR THE INSTRUCTIONS.**

**YOU GET 25 MINUTES TO READ THE  
INSTRUCTIONS.**

## INSTRUCTIONS TO INVIGILATORS AND CANDIDATES

READ THE FOLLOWING INSTRUCTIONS CAREFULLY BEFORE ANSWERING THE QUESTION PAPER. INVIGILATORS WILL EXPLAIN, IF NECESSARY.

1. The question paper comprises TWO sections:

SECTION A: Theory (80 marks)

SECTION B: Word processing/text manipulation, spreadsheet and database (120 marks)

SECTION A must be answered in the ANSWER BOOK. The ANSWER BOOK must be placed on top of the PRINTOUTS in the yellow folder.




SECTION B must be done on the computer with the aid of word processing, spreadsheet and database programs. Each PRINTOUT must have both the EXAMINATION NUMBER and the QUESTION NUMBER printed either as a header or footer (as per instruction). Handwritten EXAMINATION NUMBERS and QUESTION NUMBERS are NOT acceptable. The PRINTOUTS must be placed in the folder in the correct sequence. Candidates making use of continuous paper must detach the pages before handing them in.

2. Answer ALL the questions.
3. Read ALL the questions carefully.
4. Number the answers according to the numbering system used in this question paper.
5. The time allocated for the question paper is THREE hours.
6. NO additional printing time is allowed.
7. In the event of a power failure or a computer or printer breakdown, the invigilator must make the necessary arrangements for the candidates to continue and the actual time lost must be added.
8. If there is a problem with certain printers, e.g. does not print ë; a report should be sent with your centre's answer sheets.
9. Each answer must be printed on a separate sheet of paper and on ONE side of the paper only. PRINTOUTS must be placed in the EXAMINATION FOLDER immediately.
10. Do NOT staple answer sheets together. Marks will be subtracted for printing on BOTH sides of the paper, as well as stapling ANSWER SHEETS.


11. At the end of the examination session ALL PRINTOUTS which a candidate wishes to be marked, must be placed in the EXAMINATION FOLDER and all other PRINTOUTS, together with the EXAMINATION FOLDER, must be handed to the invigilator. NO PRINTOUTS may be removed from the examination room or put into waste-paper bins. PRINTOUTS not submitted for marking must be collected at the end of each session and destroyed at the end of the day. Only ONE PRINTOUT per question or subsection of a question may be handed in.
12. PRINTOUTS to be marked must be arranged in the same order as that of the questions in the examination paper. Marks will be subtracted for ANSWER SHEETS not arranged in sequence.
13. PRINTOUTS may be on A4 sheets of paper or on continuous computer paper unless a specified size of paper is required in a question or a letterhead is supplied.
14. ALL work on the computer should be saved at regular intervals to prevent loss of work in the event of a power failure. NO additional time is allowed for lost work. It is the candidate's responsibility to protect the answers from obliteration.
15. In order to print the original and the edited answers, candidates are reminded to save their work after completing each section before it is printed.
16. At the end of examination session, each candidate must hand in the PRINTOUTS of the answers, as well as a diskette with the saved answers properly marked with the candidate's EXAMINATION NUMBER on the cover. These diskettes must be handed to the examination section for safekeeping for one year in case enquiries should be made by the examiner/moderator and superintendents of examination. If there are no diskettes to save the answers, each candidate must create a folder on the computer he/she is working on and save his/her work in that folder which is named using his/her EXAMINATION NUMBER. The invigilator will then save the folders on a USB and submit the USB to the examination office for safe keeping for ONE year.
17. NO paper may be taken out of the examination room, including question papers. ALL papers must be handed in. Question papers may be given to the candidates at the end of the last session.
18. In the event of an examination paper being examined in more than ONE session, invigilators must ensure that all answers of candidates are removed from the hard disks or the network before candidates for the next session are allowed into the room.  
  
NO candidate may print his/her work for another candidate, make his/her floppy disk/storage device available to another candidate or access other candidates' work on the network.
19. Any attempt to access information from or transfer information to another candidate in whatever manner is a contravention of the examination rules and regulations, and will be treated as an irregularity.

**SECTION A****QUESTION 1**

1.1 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 number (1.1.1–1.1.10) in the ANSWER BOOK.

- 1.1.1 The screen that recognises touch input is a/an ... screen.
-  A recog  
B point  
C touch  
D android
- 1.1.2 Which units of memory are correctly arranged in descending order?
- A TB>MB>GB>KB  
B MB>GB>TB>KB  
C TB>GB>MB>KB  
D GB>MB>KB>TB
- 1.1.3 ONE of these stores more data than a DVD:
- A CD-Rom  
B Floppy disk  
C Blue-ray disk  
D RED RAY disk 
- 1.1.4 The output shown on the computer monitor:
- A VDU  
B Hard copy  
C Soft copy  
D Screen copy
- 1.1.5 Eight bits make up a ...
- A byte  
B megabyte  
C kilobyte  
D terabyte
- 1.1.6 Also known as read-write memory:
-  A ROM  
B RAM  
C DVD  
D Hard disk


1.1.7 The name of a user account be changed here:

- A Settings
- B Computer name
-  C Code panel
- D Control panel


1.1.8 In which situation do applications of a user account remain active?

- A When logging off
- B When switching users
- C When shutting down
- D When rebooting

1.1.9 The 'My computer' icon can be moved from here to the desktop if it is not there:



- A Wallpaper 
- B Settings
- C Display properties
- D Explorer

1.1.10 NOT an image file format:

- A .bmp
- B .png
- C .wmv
- D .jpg 

(10 × 2) (20)



- 1.2 Choose a term from COLUMN B that matches a description in COLUMN A. Write only the letter (A–H) next to the question number (1.2.1–1.2.6) in the ANSWER BOOK.

COLUMN A		COLUMN B	
1.2.1	Contains detailed information about something in a text	A	superscript
1.2.2	Process of removing an unwanted part of an image	B	Word Art 
1.2.3	Space left between the margin and the start of a paragraph	C	footnote
1.2.4	Small number or letter that appears slightly above the normal text 	D	indentation
1.2.5	Border or shape can be removed or hidden by selecting this icon	E	removing
1.2.6	Text styling feature of MS Word	F	cropping
		G	design
		H	no outline

(6 × 2)

(12)  
[32]

## QUESTION 2

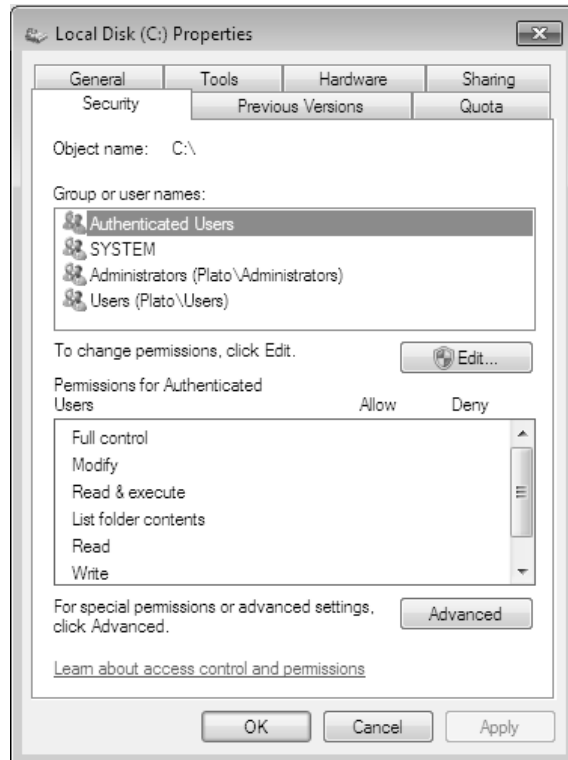
- 2.1 Indicate whether the following statements are TRUE or FALSE. Choose the answer and write only 'True' or 'False' next to the question number (2.1.1–2.1.10) in the ANSWER BOOK. Correct the statement if it is FALSE.
- 2.1.1 The free repair of a software bug available on the Internet is called a patch. 
- 2.1.2 An example of a correct email address is name.website.com.
- 2.1.3 WWW is computer jargon for World Wide Wildlife Web.
- 2.1.4 Downloading is the process of transferring files from a computer to the Internet.
- 2.1.5 A home page is a website's introduction page. 
- 2.1.6 Bing and Yahoo are examples of search engines.
- 2.1.7 Configuration is the verification of a login name and password.
- 2.1.8 Internet Explorer falls under an operating system.

- 2.1.9 Browsing is when you move from one website to another.
- 2.1.10 HTML stands for Hypertext Manipulation Links. <sup>☺</sup>  
(10 × 2) (20)
- 2.2 The Internet has contributed immensely to the agricultural sector.  
Name FIVE ways how the Internet is helping the agricultural sector. (5 × 2) (10)
- 2.3 Ergonomics is a field of technology, which considers human capabilities and limitations in the design of machines and equipment that people use, and the environments in which they operate. <sup>☺</sup>  
State FOUR reasons why ergonomics must be considered in the design of machines and equipment used in the work place. (4)
- 2.4 Identify FIVE formal steps that must be taken when buying computer hardware for business concerns. (5)
- 2.5 Different methods may be used to pay suppliers when purchasing computers. <sup>☺</sup>  
Discuss any TWO methods that a farmer might use when paying for computers purchased for his/her farm. (4)
- [43]**



### QUESTION 3

Security is regarded as ONE of the most important aspects when using a computer. Activate the security properties of your computer disk, as shown below. Make a print screen of the window and paste it on a page in Microsoft Word. Make a PRINTOUT with your EXAMINATION NUMBER as a header on the left-hand side and QUESTION 3 on the right-hand side.



[5]



TOTAL SECTION A:

80

**SECTION B****QUESTION 4**

4.1 Create the following document (as shown in FIGURE 1 below) in Excel using COURIER NEW 12 pt.  
Use the exact cell references as indicated. You will be penalised for using the wrong cell addresses.



4.1.1 Do NOT add row and column headings. They were only inserted so that you can see which cell addresses should be used.

4.1.2 Save the document as QUESTION 4.1.





4.1.3 Insert your EXAMINATION NUMBER as a header on the left-hand side and QUESTION 4.1 on the right-hand side. (2)

4.1.4 PRINT the document in single A4 landscape without row and column headings, and gridlines. (2)

4.1.5 Marks for accuracy (2)

	A	B	C	D	E	F	G	H
1	JOBERT ORCHARDS							
2	FRUIT HARVEST AND SALES							
		TONNES	PRODUCTION		SELLING	%		
3	FRUIT	SOLD	COST/ TONNE	MARK UP	PRICE/ TONNE	/	TOTAL	COMMISSION
4	PAPAYA	1.3	4500	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
6	KIWI	0.9	6200					
6	GRANADILA	2	6500					
7	MANGO	4.5	3000					
8	POMEGRANATE	3.8	2500					
9	DRAGON FRUIT	2.6	3200					
10	BLUE BERRIES	2	7500					
11	STRAWBERRIES	0.7	7100					
12	TOTAL	<b>F</b>		<b>F</b>				
13	AVERAGE	<b>G</b>		<b>G</b>				
14	HIGHEST PROFIT	<b>H</b>						
15							MARK UP	
16						2000	5%	
17						3000	10%	
18						4000	15%	
19						5000	20%	
20						6000	25%	
21						7000	30%	
22						8000	35%	

**FIGURE 1**


- 4.2 Retrieve the document QUESTION 4.1 and make changes, as indicated in FIGURE 2 below. Immediately save it as QUESTION 4.2.
- 4.2.1 Make row 2, 4, 14 and 18 blank by inserting new rows in the spreadsheet. (1)
- 4.2.2 Do the following changes on the main heading 'JOBERT ORCHARDS' 
- Merge and center across the width of the spreadsheet
  - Change the font to COPPER BLACK 16 pt
  - Double underline
- (3)
- 4.2.3 Change the subheading 'FRUIT HARVEST AND SALES' to italics and underline. (2)
- 4.2.4 Bold and center (horizontally and vertically) the column headings in row 5. (2)
- 4.2.5 Use the wrap text function in the column headings in row 5, as indicated in FIGURE 2 below. (1)
- 4.2.6 Insert horizontal and vertical lines using the method you are familiar with.  (2)
- 4.2.7 Calculate the answers where the letters of the alphabet A–H appear in FIGURE 2. Use the correct cell reference in the formulas.
- A – Use the VLOOKUP function to calculate the Mark Up % according to Production Cost/Tonne. Use the table below as a reference.
- B – Add the Mark Up amount to the Production Cost.
- C – Profit/Tonne = Selling Price less Production Cost 
- D – Total Income = Tonnes Sold × Selling Price/Tonne.
- E – Use the IF function to calculate the commission if a commission of 15% is awarded to any person who sells TWO tonnes or more.
- F – Calculate the totals of the indicated columns.
- G – Calculate the average of the indicated columns.
- H – Find the highest profit made.  (8 × 2) (16)
- 4.2.8 Sort the data in descending order according to the Tonnes Sold column. (1)

- 4.2.9 Display all the figures that represent money with the R sign and TWO decimal places. ALL other figures must be displayed as integers. (2)
- 4.2.10 Center and bold ALL answers calculated in A–H. (2)
- 4.2.11 Make a PRINTOUT of the spreadsheet in landscape with row and column headings, but NO gridlines. The spreadsheet must fit on TWO pages. (4)

	A	B	C	D	E	F	G	H
1	<b><u>JOBERT ORCHARDS</u></b>							
2								🚲
3	<b><u>FRUIT HARVEST AND SALES</u></b>							
4								
5	<b>FRUIT</b>	<b>TONNES SOLD</b>	<b>PRODUCTION COST/ TONNE</b>	<b>MARK UP</b>	<b>SELLING PRICE/ TONNE</b>	<b>PROFIT/ TONNE</b>	<b>TOTAL INCOME</b>	<b>COMMISSION</b>
6	PAPAYA	1.3	4500	A	B	C	D	E
7	KIWI	0.9	6200	↓	↓	↓	↓	↓
8	GRANADILA	2	6500	↓	↓	↓	↓	↓
9	MANGO	4.5	3000	↓	↓	↓	↓	↓
10	POMEGRANATE	3.8	2500	↓	↓	↓	↓	↓
11	DRAGON FRUIT	2.6	3200	↓	↓	↓	↓	↓
12	BLUE BERRIES	2	7500	↓	↓	↓	↓	↓
13	STRAWBERRIES	0.7	7100	↓	↓	↓	↓	↓
14								
15	TOTAL	F			F	→		
16	AVERAGE	G		G	→			
17	HIGHEST PROFIT					H		
18								
19							MARKUP	
20						2000	5%	
21						3000	10%	
22						4000	15%	
23						5000	20%	
24						6000	25%	
25						7000	30%	
26						8000	35%	

**FIGURE 2**

- 4.3 Retrieve the document QUESTION 4.2 and immediately save it as QUESTION 4.3.
  - 4.3.1 Display the formulas. (8)
  - 4.3.2 Change the question number in the header to QUESTION 4.3. (1)
  - 4.3.3 Adjust the column widths. (1)
  - 4.3.4 Save and PRINT the document in landscape without the row and column headings or gridlines. The document must fit on TWO A4 pages. (4)


4.4 Retrieve the document you saved as QUESTION 4.2. Immediately save it as QUESTION 4.4. 

4.4.1 Create a pie chart comparing the Profit/Tonne for each fruit. (2)

4.4.2 Insert the following information as the heading of your graph:

PROFIT/TONNE  
QUESTION NO  
EXAM NUMBER (3)

4.4.3 The legends must appear below the chart. (1)

4.4.4 Data labels must appear as percentages and the best fit function must be used.  (2)

4.4.5 Move the graph to a new sheet and print it on ONE page. (2)

**[66]**

**QUESTION 5**

The computer lecturer has already keyed in a document on the data diskette/desktop/documents. The name of the document is 'WORD DOCUMENT'. The following is a copy of the document.

LIFE IS A GARDEN



Anyone can grow a food garden ... you don't necessarily need a big space or a lot of technical knowledge, just the willingness to get your hands dirty. We look at three urban gardens and talk to their caretakers about all things green and glorious.

Six years or so ago, Joy had a management consulting career focusing on business process re-engineering and change management - phew. However, these days she earns a living designing urban food gardens. Nice work if you can get it. So, how did she do it? A combination of circumstances meeting inspiration. Jo left work when she became a mother and her passion for good food and decor blossomed as she poured over magazines and watched TV between feeds and naps. She decided to grow her own vegetables and herbs, so that she could have access to some of the ingredients used in shows such as Master Chef. The rest is history.



Her passion for creating gardens that are edible and is beautiful blossomed into a fledging business and for me it is more evident in Spring than any other time of year. There is a great sense of discipline in nature for me. There is a great sense of 'now or never' when the first buds open, seeds reveal themselves from the weeds and the first fragrance is emitted as new flowers bloom. That energy behind the awakening of plants from their winter sleep is mysterious and fills me with awe.



Joy's top gardening tip

'Plan, plan and plan some more. An annual plan that takes into account time to sow, seedlings, time to mature, maintenance, harvest and spatial requirements is a small-space gardener's best friend.'

Benoni Child Welfare

The Collin House of Youth Care Centre in Benoni is a place of Safety, which forms part of the Greater Benoni Child Welfare, and accommodates 20 children between the ages of 3 and 13 in need of protection as they have either been abandoned or physically and emotionally abused and neglected. The Ackerman Pick n Pay Foundation supports a food garden for the centre, which the children love, says Greater Benoni Child Welfare Director, Elsie Labuschagne.



Over weekends

'Over weekends, the children tend to it and they like to pick fresh vegetables, such as tomatoes, green beans, carrots and strawberries, and eat them on the spot. This also empowers them with life skills and teaches them to be self-sufficient and healthy.' The benefits extend far beyond self-sufficiency - research has found that gardening can aid the development of cognitive and social skills in children.



Loving food gardening

'I love food gardening,' says Elsie, 'as we can share the fresh produce with some of our foster parents in Daveyton as well, and we teach the children at Colin House CYCC how to start their own gardens and benefit from it. My gain from it is very selfish as I love the tranquility and sense of achievement I experience when I work in it and sample the vegetables.'

- 5.1 Open the document titled 'WORD DOCUMENT' mentioned on the previous page.
- 5.2 Immediately save it under a new name 'QUESTION 5'.
- 5.3 Make the following changes to the document. 
- 5.3.1 Change the heading 'LIFE IS A GARDEN' to bold and underlined. Font type must be Bauhaus 93, size 16 pt. (4)
- 5.3.2 Change the first paragraph 'Anyone can ... and glorious'
- Indention must be 5 cm/2' on BOTH sides.
  - Line spacing must be double.
  - The paragraph must be centered
- (4)
- 5.3.3 The second paragraph must be copied as the last paragraph of the document. (1)
- 5.3.4 The sentence 'Joy's top gardening tip' must be bold, italic and right aligned. (3)
- 5.3.5 ALL sentences from 'Her passion ... with awe' must be in bullet form.  (1)
- 5.3.6 Number the paragraphs as indicated. The number and the full stop must appear in the left-hand margin. (2)

1. Benoni Child Welfare

The Collins House of Youth Care Centre in Benoni is a place of safety, which forms part of the Greater Benoni Child Welfare, and accommodates 20 children between the ages of 3 and 13 in need of protection as they have either been abandoned or physically and emotionally abused and neglected. The Ackerman Pick 'n Pay Foundation supports a food garden for the centre, which the children love, says Greater Benoni Child Welfare Director, Elsie Labuschagne.



2. Over weekends

'Over weekends, the children tend to it and they like to pick fresh vegetables, such as tomatoes, green beans, carrots and strawberries, and eat them on the spot. This also empowers them with life skills and teaches them to be self-sufficient and healthy.' The benefits extend far beyond self-sufficiency - research has found that gardening can aid the development of cognitive and social skills in children.

3. Loving food gardening

'I love food gardening,' says Elsie, 'as we can share the fresh produce with some of our foster parents in Daveyton as well, and we teach the children at Colin House CYCC how to start their own gardens and benefit from it. My gain from it is very selfish as I love the tranquillity and sense of achievement I experience when I work in it and sample the vegetables!'



5.3.7 Insert the following table at the end of the document. The heading of the table 'Vegetables for life' must be in upper case and bold. Shade the heading column with *black, text1, lighter 50%*. Apply double borders to the heading column. Highlight the column headings with turquoise.

VEGETABLES FOR LIFE		
Leaf	Root	SOCIO-CULTURAL
Spinach	Yam	Tomato
Cabbage	Turnip	Eggplant
Lettuce	Turmeric	Pepper
Cress	Carrot	Chayote



(7)

5.3.8 Insert a page number at the top right of ALL pages.

(1)

5.4 Key in your EXAMINATION NUMBER as a footer on the left-hand side and QUESTION 5 on the right-hand side.

(2)



5.5 Save the document and make a PRINTOUT.

[25]



**QUESTION 6**

You have just been promoted as a farm manager. The farm owner has tasked you to prepare a vegetable database. Create a database using the file name 'VEGETABLE'.

6.1 Create the following fields:

<b>FIELD</b>	<b>INFORMATION</b>
NO	Auto number
FRUIT NAME	20 characters
FRUITE TYPE	15 characters
PLANTING DATE	The date must be in the format YYYY/MM/DD
SELLING PRICE	Will not exceed R9 999,99
DRIED	YES/NO
EXAM NO	Long integer
QUESTION 3	10 characters

6.2 Key in the following records and save the table as 'FRUIT'.  
Make a PRINTOUT of the table in A4 landscape.

(10)

NO	FRUIT NAME	FRUIT TYPE	PLANTING DATE	SELLING PRICE	DRIED	EXAM NUMBER	QUESTION 3
1	Banana	Fleshy	02/06/2015	R1 200,00	True	YOUR EXAM NO.	
2	Achene	Dry indehiscent	06/02/2014	R1 750,00	False	YOUR EXAM NO.	
3	Follicle	Dry dehiscent	08/07/2016	R2 455,00	False	YOUR EXAM NO.	
4	Mulberry	Multiple	10/11/2010	R1 625,00	True	YOUR EXAM NO.	
5	Raspberry	Aggregate	22/09/2011	R1 800,00	True	YOUR EXAM NO.	
6	Cranberry	Fleshy	01/10/2012	R2 150,00	False	YOUR EXAM NO.	
7	Pine apple	Multiple	09/12/2014	R1 700,00	True	YOUR EXAM NO.	



6.3 Make a PRINTOUT of the structure of the table above. The PRINTOUT must be in portrait. (5)

6.4 Create a query with all fields in the table  
The title of the query must be your 'EXAM NO. QUEST 3 QUERY'.  
Print the query in landscape. (3)



6.5 Create a report using the following headings:

FRUIT NAME	FRUIT TYPE	PLANTING DATE	SELLING PRICE
------------	------------	---------------	---------------

(1)

6.5.1 ALL fruits must appear in the report, except for the fleshy type. (1)

6.5.2 Sort the data in descending order according to the planting date. (2)

6.5.3 The title of the report must be your 'EXAM NO. QUEST 6 REPORT'. (2)

6.5.4 The calculated TOTAL SELLING PRICE must appear below the selling price of the last fruit and the word TOTAL must appear below the last planting date. (4)

6.5.5 Make a PRINTOUT of the report in A4 portrait. (1)



**[29]**

**TOTAL SECTION B: 120**  
**GRAND TOTAL: 200**