higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE

DATA MANAGEMENT: FARMING N5

(4090465)

17 November 2023 (X-paper)
09:00–12:00

This question paper consists of 18 pages

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DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE
DATA MANAGEMENT FARMING N5
TIME: 3 HOURS
MARKS: 200

INSTRUCTIONS AND INFORMATION

CANDIDATES ARE ALLOWED 25 MINUTES TO READ THE INSTRUCTIONS.

TURN THE PAGE FOR THE INSTRUCTIONS.

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INSTRUCTIONS TO INVIGILATORS AND CANDIDATES

READ THE FOLLOWING INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING TO ANSWER THE QUESTION PAPER – INVIGILATORS WILL EXPLAIN IF NECESSSARY.

1. The question paper comprises two sections:

   SECTION A: Theory (100 marks)
   SECTION B: Word processing/text manipulation and spreadsheet and database (100 marks)

   Section A must be answered in the ANSWER BOOK. The ANSWER BOOK must be placed on top of all the PRINTOUTS in the yellow folder.
   Section B is done on computer with the aid of word processing, spreadsheet and database programs. Each PRINTOUT must display a printed EXAMINATION NUMBER and QUESTION NUMBER either as a header or footer (as instructed). Handwritten EXAMINATION and QUESTION NUMBERS are NOT acceptable.

   The PRINTOUTS must be placed in the folder in the correct sequence. Candidates who use continuous paper must tear the pages apart before handing in.

2. The time allocated for the question paper is THREE hours.

3. No additional printing time is allowed.

4. 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.

5. If there is a problem with certain printers, e.g., does not print ë, submit a report with the centre's ANSWER SHEETS.

6. Candidates may have a typing ruler, a dictionary and a list of ASCII codes in their possession. The spell checker may be used.

7. Each answer must be printed on ONE side of a separate sheet of paper only. PRINTOUTS must be placed in the EXAMINATION FOLDER immediately after printing.

8. Do not staple ANSWER SHEETS together. Marks will be subtracted for printing on both sides of the paper as well as stapling of ANSWER SHEETS.

9. At the end of the examination session ALL PRINTOUTS to be marked, must be placed in the EXAMINATION FOLDER. The EXAMINATION FOLDER and ALL other PRINTOUTS not to be marked, MUST be handed to invigilator. No PRINTOUTS whatsoever may be removed from the examination room or placed in the waste-paper bins. PRINTOUTS not submitted for marking must be collected at the end of each session and must be destroyed at the end of the day. Only one PRINTOUT per question or subsection of a question may be handed in.

10. 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 number order.

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11. PRINTOUTS may be done on A4 sheets of paper or on continuous computer paper; unless a specified paper size is required in a question or a letterhead is supplied.

12. 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 MAY be allowed to redo such lost work. It is the candidates' responsibility to protect their answers from obliteration.

13. In order to print the original as well as the edited attempts of an answers, candidates are reminded to save the work after each separate section before it is printed.

14. 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 the examination. If no diskettes are available to save the answers, candidates must create folders on the computer on which they are working and save all their work in that folder. Name this folder with the candidate's 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).

15. Note that no paper, QUESTION PAPERS included, may be taken from the examination room. All paper must be handed in. QUESTION PAPERS may be returned to the candidates at the end of the last session.

16. In the event of a subject 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.

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 irregular act.

DO NOT TURN THE PAGE UNTIL THE INVIGILATOR INSTRUCTS YOU TO DO SO.

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SECTION A: THEORY

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 Which ONE of the following is NOT a main part of a personal computer?

A Monitor
B Keyboard
C Modem
D System box

1.1.2 The following does NOT describe the central processing unit:

A It is a microchip
B Its clock speed is measured in megahertz or gigahertz
C It interprets and executes instructions and performs calculations
D Its rotating speed is measured in r/min

1.1.3 … acts as a barrier between individual computers, or computer networks, and the wider internet, making them invisible.

A Backups
B Malware
C Firewall
D Password

1.1.4 The term, hardware, refers to …

A a set of instructions that a computer must have to function.
B physical components of a computer.
C the components that one cannot touch.
D word processing applications.

1.1.5 Malware can infect a computer in the following ways, except …

A by an e-mail attachment.
B by distributing illegal software across network connections.
C through security loopholes in operating systems.
D reducing the distance between computers.

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1.1.6 … means illegally duplicating copyrighted software.

A Data Publicity Law
B Software Piracy
C Data Protection Act
D Copyright

1.1.7 When a computer user follows correct ergonomic principles:

A Injuries, errors, defects and costs are reduced.
B Less work is done.
C More heat is generated by computers.
D Employee absence increases.

1.1.8 … is defined as a group of legal rights that protect creative works from being used, reproduced, performed or disseminated without permission from the creator of the work.

A End-user agreement
B Copyright
C Shareware
D Freeware

1.1.9 Which ONE description is correct when referring to ROM?

A It is data that can be changed
B It is temporary memory
C It is available for storing data
D Forms a small part of the total memory.

1.1.10 … is software used to detect and remove malware.

A BIOS
B Spyware
C Trojan
D Antivirus

(10 × 2) (20)

1.2 Indicate whether the following statements are TRUE or FALSE by writing 'True' or 'False' next to the question number (1.2.1–1.2.10) in the ANSWER BOOK.

1.2.1 Some gadgets, such as a clock and the CPU and RAM usage indicators, may appear on the desktop.

1.2.2 Hardware can be used without the operating system, which is the primary element of software.

1.2.3 Mozilla Firefox is an internet browsing program used to access the internet and view webpages.

1.2.4 Some flash drives can be locked or write protected by changing the switch from "unlock" to "lock".

1.2.5 Hard disk refers to the rigid sectors inside the disk drive where the storage area is.

1.2.6 Laser printers are fast, versatile, operate silently and produce printing of high quality.

1.2.7 The ASCII codes are a system used to represent each number and character in binary format.

1.2.8 A file server is the main computer with all the data and programs within a network.

1.2.9 Hardware ports on a computer provide an interface for the transfer of information between it and other devices.

1.2.10 The quality of the colour displayed by a monitor depends on the construction of the monitor as well as the circuitry in the computer.

(10 × 1) (10)

1.3 Complete the following sentences by choosing a word or words from the list below. Write only the answer next to the question number(1.3.1–1.3.10) in the ANSWER BOOK.

user friendly; laser; trojan; copyright; virus walls; open source; parallel; .jpg; file virus; serial; cold boot; virus; file transfer protocol; inkjet

1.3.1 File extension used for a graphic file.

1.3.2 LPT1 is a device name for a … port of a microcomputer.

1.3.3 Software program which is accessible to the general public free of charge.

1.3.4 Unregistered rights that protect published and unpublished work.

1.3.5 Manifests itself onto the boot sector of a diskette or hard disk.

1.3.6 Phrase describing a program which enables people with limited computer knowledge to follow working procedures.

1.3.7 The computer is off and then switched on.

1.3.8 Offers integrated virus detection and removal, as well as code blocking.

1.3.9 Fast, versatile, operate silently and produce printing of high quality.

1.3.10 Detect and remove viruses hidden inside internet file transfers.

(10 × 2) (20)

1.4 Define the following terms:

1.4.1 Hard disk

1.4.2 GUI

1.4.3 Disk defragmentation

1.4.4 Column

1.4.5 Internet

1.4.6 Debtor

(6 × 2) (12)

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1.5 Write the extensions of the file types below:

1.5.1 Image file

1.5.2 Sound file

1.5.3 Portable document format file

(3 × 2) (6)
[68]

QUESTION 2

2.1 Differentiate between *disk copy* and *copy*. (2 × 2) (4)

2.2 It is important to make regular backups of the hard disk to a number of diskettes, CDs or DVDs.

Write down the commands to follow when making a backup. (5)
[9]

QUESTION 3

Viruses attach secretly to other programs and when the infected program is run by a user, the virus hides in the computer.

3.1 Define *computer antivirus.* (2)

3.2 State FIVE ways by which viruses enter a computer system. (5)

3.3 Differentiate between *file virus* and *boot sector virus*. (2 × 2) (4)
[11]

QUESTION 4

4.1 Define *accounting source documents.* (2)

4.2 Journals are financial records in date order that are linked to other more important books.

4.2.1 List TWO sources of information from where permanent summaries and records for journals originate. (2)

4.2.2 Mention FOUR reasons why a farmer should keep a good filling system. (4 × 2) (8)
[12]

TOTAL SECTION A: 100

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SECTION B: PRACTICAL

QUESTION 1: SPREADSHEET

1.1 Create the following document in the spread sheet (Excel) program.

Use the exact cell references as indicated. You will be penalized for using wrong cell addresses.

1.1.1 Do not enter row and column headings or gridlines – they were only used for you to see which cell addresses to use. (1)

1.1.2 Use the wrap text function for the column headings in row 4. (1)

1.1.3 Save the document as QUESTION 1.1

1.1.4 As a header, key in your EXAMINATION NUMBER and QUESTION 1.1 right-aligned. (2)

1.1.5 Print the document on an A4 landscape page **without** row, column headings and gridlines. (1)

	A	B	C	D	E	F	G
1	LOCAL FARMERS FIRST						
2	URBANOLOGI FRESH PRODUCE						
3							
4	NAME OF VEGETABLE	QUANTITY KGS	PRICE/ KGS	TOTAL COST	TOTAL INCOME	PROFIT AMOUNT	% PROFIT
5	SILVERBEET	95	R 59.80				
6	BRUSSEL SPROUTS	111	R 80.00				
7	ZUCCHINI	157	R 42.71				
8	YAM	84	R 39.79				
9	CELERY	56	R 201.00				
10	ASPARAGUS	65	R 87.00				
11	SHALLOT	190	R 89.87				
12	GARLIC	73	R 142.36				

FIGURE 1

1.2 Retrieve the document that you saved as QUESTION 1.1 and bring about the changes indicated in FIGURE 2 below. Immediately save it as QUESTION 1.2.

1.2.1 Change the main heading “LOCAL FARMERS FIRST”, as follows:

- Underline
- Change the font size to 18 pt and the font type to Times New Roman.
- Centre the main heading across the width of the spreadsheet. (4)

1.2.2 Change the subheading, “URBANOLOGI FRESH PRODUCE”, to bold and italics. (2)

1.2.3 Insert a blank row between row 1 and row 2, insert another between rows 3 and 4. (2)

1.2.4 Bold and centre (horizontally and vertically) the column headings in row 5.
Text wrap should be applied as shown. (2)

1.2.5 Format raw 5 with colour shading of Tan, Background 2, and darker 50%. (1)

1.2.6 Calculate the answers where the letters of the alphabet A to H appear in FIGURE 2. Use the correct cell reference in the formulas.

A TOTAL COST = PRICE/KG by QUANTITY (1)

B TOTAL INCOME = Sum of TOTAL COST, VAT (15%) and MARKUP (12%) (2)

C PROFIT AMOUNT = TOTAL INCOME less TOTAL COST (1)

D % PROFIT = % of PROFIT AMOUNT (1)

E TOTAL = Total of all columns (1)

F AVERAGE = AVERAGE of PROFIT AMOUNT (1)

G COUNT = Number of vegetables (1)

H MAXIMUM = Highest profit (1)

1.2.7 Insert horizontal and vertical lines using the method you are familiar with. (2)

1.2.8 Display all figures that represent money with the R sign and 2 decimal places. All other figures must be displayed as integers. (3)

1.2.9 Right-align and bold all answers calculated in A to H. (2)

1.2.10 Make a PRINTOUT of the spreadsheet in landscape format **without** row and column headings or gridlines. The spreadsheet must fit onto one page. (2)

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	A	B	C	D	E	F	G
1	LOCAL FARMERS FIRST						
2	URBANOLOGI FRESH PRODUCE						
3							
4	NAME OF VEGETABLE	QUANTITY KGS	PRICE/ KGS	TOTAL COST	TOTAL INCOME	PROFIT AMOUNT	% PROFIT
5	SILVERBEET	95	R 59.80	A	B	C	D
6	BRUSSEL SPROUTS	111	R 80.00				
7	ZUCCHINI	157	R 42.71				
8	YAM	84	R 39.79				
9	CELERY	56	R 201.00				
10	ASPARAGUS	65	R 87.00				
11	SHALLOT	190	R 89.87				
12	GARLIC	73	R 142.36				
13							
14	TOTAL						E
15	AVERAGE					F	
16	COUNT				G		
17	MAXIMUM						H
18							
19	VAT	15%					
20	MARK UP	12%					

FIGURE 2

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1.3 Retrieve the document that you saved as QUESTION 1.2 and immediately save it as QUESTION 1.3.

1.3.1 Display the formulae. (8)

1.3.2 Change the question number in the header to QUESTION 1.3. (1)

1.3.3 Adjust the column widths. (1)

1.3.4 Save and print the document in landscape **with** row and column headings **but without** gridlines. The document must fit onto one A4 page. (2)

1.4 Retrieve the document that you saved as QUESTION 1.2 and immediately save it as QUESTION 1.4.

1.4.1 Create a column chart comparing TOTAL COST and TOTAL INCOME. (1)

1.4.2 Insert the following information as the heading of the graph:

LOCAL FARMERS FIRST
QUESTION 1.4
EXAMINATION NUMBER (3)

1.4.3 The legend must appear at the bottom of the graph. (1)

1.4.4 Format the plot area using picture fill, Fossil Fish. (1)

1.4.5 Provide suitable titles for the X- and Y-axes. (2)

1.4.6 Move the graph to a new sheet. (1)

1.4.7 Print the graph in landscape on ONE page. (1)

[56]

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QUESTION 2: WORD PROCESSING

The computer lecturer has already keyed in a document on the data diskette/desktop/Documents. The name of the document is “WORD DOCUMENT”. A copy of the document follows:

THE CHEF WHO PUTS LOCAL FARMERS FIRST

Jack Coetzee, chef at a Johannesburg-based restaurant and a believer in sustainable living, sources all his ingredients from within a 150 km radius of the restaurant. To achieve this, he has worked hard at building close working relationships with local farmers.

The vast majority of chefs create a menu and then find the ingredients. Jack Coetzee, the chef of Urbanologi-Asian fusion restaurant in the Johannesburg CBD has turned the process on its head. To achieve this, he has to journey into the rural areas of Gauteng, building relationships with farmers along the way to reach the point where all the ingredients for his menus are sourced from within 150 km of his restaurant. This is no mean feat in a world where the ingredients for a single piece of sushi can travel up to 25 000 km to reach a diner’s plate.

EXPLORING THE BACKYARD

Coetzee notes that there are certain ingredients that simply are not available within the 150 km radius, but this has switched his thinking from designing a menu based on finding ingredients for what he wants to cook, to first looking at the ingredients available and then deciding what he can do with them. Interestingly, he is already used to this innovative approach; growing up on a farm in Zimbabwe with a limited grocery selection taught him to improvise.

"I went to boarding school and the food was terrible", he laughs. "During holidays I’d come home, scratch around for old recipe books and start experimenting. Because we had a limited range of ingredients, I’d end up researching replacement ingredients and this eventually sparked a love for food and cooking."

After school, Coetzee studied to be a chef in Cape Town and was eventually drawn to Hazyview in Mpumalanga to head Summerfield Kitchen. "I was lured by the rural lifestyle as the restaurant is situated on a farm, which also produced most of the vegetable patch. When I was offered the position at Urbanologi, I realised that I needed to do something different. There are plenty of chefs who can cook well, but I want to use my talent in a way that could benefit communities in a good way."

"A few months ago, I sat back and realised that I could put an entire menu together based on what I was getting from these suppliers, all of whom were within a 150 km radius from the restaurant. And so Project 150 was born."

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'WE SERVE SIMPLE THINGS THAT ARE LOCAL AND DELICIOUS'

FOOD PHYLOSOPHY

- This seasonality has required a concerted effort to change Urbanologi's customers' mind-set from wanting to enjoy their favourite dishes all year round to trying different meals and eating what is in season.
- This takes a lot of interaction with the customers and reiteration of our philosophy to promote micro seasons and the reasons behind it. For 150 days, we feature an ingredient a day on our social media pages to get the message across about the seasonal, locally sourced food.
- Through this process, we hope to at least plant the seed about sustainable eating. The menu states where the ingredients are sourced from and the distance to the farm.

2.1 Open the document, "WORD DOCUMENT", mentioned on the previous page.

2.2 Immediately save it under the new name, "QUESTION 2".

2.3 Make the following changes in the document.

2.3.1 Change the main heading "THE CHEF WHO PUTS LOCAL FARMERS FIRST" to upper case, bold, underline and centre. Change the font type to Verdana and font size to 14 pt. (5)

2.3.2 Change the left- and right-hand margins of the first page to 3.5 cm. (1)

2.3.3 Find and replace the word "farm" where it stands alone throughout the text with the word "iron" in bold and italics. (2)

2.3.4 Change the text into two columns. The paragraph "I went to boarding … cook" in column 1 and the paragraph "A few months … 150 was born" in column 2. Change the text in the columns to full justification. Shade the 1st row in each column with light grey shading. (4)

2.3.5 Insert a page break before the columns. (2)

2.3.6 Bold and use toggle case on the sentence "Jack Coetzee, chef… restaurant." (2)

2.3.7 Convert the text of the last two bullets into a table with 2 columns. The text from each bullet in its own column (2)

2.3.8 Insert a page number at the bottom right of all pages except on page 1. (2)

2.4 As a header, key in your EXAMINATION NUMBER left-aligned and QUESTION 2 right-aligned. (2)

2.5 Save the document and make a PRINTOUT.

[22]

QUESTION 3: DATABASE

You have just been promoted as a farm manager. The farm owner has tasked you to prepare a crop database. Create the database using the file name, "LOCAL FARMERS FIRST".

3.1 Create the following fields

FIELD	INFORMATION
NO.	Auto number
CROP	20 characters
PRODUCT CODE	Text (4 characters)
DATE PURCHASED	The date must be in the format DD/MM/YYYY
UNITS IN STOCK	Long integer
PRICE PER TONNE	Currency (Not more than R999.99)
ORGANIC	YES/NO
QUESTION 3	10 characters

3.2 Key in the following records and save the table as "PRODUCE".
Make a PRINTOUT of the **table** in A4 landscape orientation. (8)

NO	CROP	PRODUCT CODE	DATE PURCHASED	UNITS IN STOCK	PRICE PER TONNE	ORGANIC	QUESTION 3
1	SILVER BEET	P035	2019/01/15	95	R 59.80	YES	QUESTION 3
2	BRUSSEL SPROUTS	H013	2019/03/01	111	R 80.00	NO	QUESTION 3
3	ZUCCHINI	G109	2019/03/30	157	R 42.71	YES	QUESTION 3
4	YAM	S097	2019/05/02	84	R 39.71	YES	QUESTION 3
5	CELERY	B158	2019/09/22	56	R 201.00	YES	QUESTION 3
6	ASPARAGUS	C456	2019/06/25	65	R 87.00	NO	QUESTION 3
7	SHALLOT	D043	2019/11/26	190	R 89.87	YES	QUESTION 3
8	GARLIC	PB10	2019/04/17	73	R142.36	NO	QUESTION 3

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3.3 Make a PRINTOUT of a **structure** of the table above in portrait orientation. (5)

3.4 Create a report using the following headings 

CROP	DATE PURCHASED	UNITS IN STOCK	PRICE

(1)

3.4.1 Only use the types of which the price is R80,00 or more to appear in the report. (1)

3.4.2 Sort the data in descending order according to the DATE PURCHASED. (2)

3.4.3 The tittle of the report must be your EXAMINATION NUMBER, QUESTION 3, REPORT. (2)

3.4.4 The calculated AVERAGE PRICE must appear underneath the last price and the word AVERAGE must appear underneath the last UNITS IN STOCK. (2)



3.4.5 Make a PRINTOUT of the report on an A4 portrait page. (1)

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TOTAL SECTION B: 100
GRAND TOTAL: 200

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