higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE

DATA MANAGEMENT: FARMING N4

(4090454)

24 May 2021 (X-paper)
09:00–12:00

A typing ruler, dictionary and list of ACII codes may be used.

This question paper consists of 14 pages.

016Q1J2124

Copyright reserved

DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE
DATA MANAGEMENT: FARMING N4
TIME: 3 HOURS
MARKS: 200

Turn the page for the instructions.

You get 25 minutes to read the instructions.

Copyright reserved

INSTRUCTIONS AND INFORMATION FOR INVIGILATORS AND CANDIDATES

Read the following instructions carefully before answering the question paper. If necessary, the invigilators will explain any matters that might be unclear.

1. The question paper comprises two sections:

SECTION A:	Theory	120 marks
SECTION B:	Word processing Spreadsheet Database	80 marks

2. Answer SECTION A in the ANSWER BOOK and place it on top of all the printouts in the yellow folder.

   SECTION B is done on a computer with the aid of word-processing, spreadsheet and database programs. Each printout must have both the student's examination number and the question number printed either as header or footer (as per instruction). Hand-written examination numbers and question numbers will not be accepted. Place printouts in the folder in the correct sequence. Candidates using continuous paper must tear the pages apart before submission.

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, send a report with the ANSWER SHEETS.

6. The spellchecker may be used.

7. Print each answer on a separate ANSWER SHEET and on one side only. Immediately place printouts in the examination folder.

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

9. At the conclusion of the examination session all printouts that a candidate wants 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 whatsoever 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 must be destroyed at the end of the day. Only one printout per question or subsection of a question may be submitted.

10. Printouts to be marked must be arranged in the same order as that of the questions in the question paper. Marks will be subtracted if not arranged in the numbered order.

Copyright reserved

11. Printouts may be on A4 ANSWER SHEETS or on continuous computer paper unless a specified size of paper 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 for such lost work. It is the candidate's responsibility to protect answers from obliteration.

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

14. At the end of the examination session each candidate must submit the printouts of the answers as well as a storage device with the saved answers (properly marked with the candidate's examination number on the cover). These storage devices 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 storage devices to save the answers, candidates must create folders on the computer they are working on and save all their work in that folder which is named using their examination numbers. The invigilator will then save the folders on a USB and submit the USB to the exam office for safekeeping for one year.

15. Please note that no paper may be taken out of the examination room, including the question paper. All papers must be handed in. Question papers may be given to candidates at the end of the last session.

16. In the event of a question 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.

17. No candidate may print his/her work for another candidate, make his/her 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.

Copyright reserved

SECTION A (THEORY)

QUESTION 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 (1.1–1.10) in the ANSWER BOOK.

1.1 Which ONE of the following is not antivirus software?

A McAfee
B AVG
C Spyware
D Malwarebytes

1.2 Which ONE of the following statements regarding the handling of a password is incorrect?

A Use a mixture of letters.
B Share the password with anybody.
C Change the password frequently.
D Password should not be guessed.

1.3 Which ONE of the following is an output device?

A Keyboard
B Optical mouse
C Stylus
D Headphones

1.4 The brain of the computer:

A ROM
B Central processing unit
C RAM
D e-reader

1.5 A/An … is the amount of memory required to store one character.

A unicode
B bit
C kilobyte
D byte

1.6 Why is it important to make regular backups of a computer?

A Prevents loss of data
B Complies with the law
C Protects the computer
D Increases the storage capacity

1.7 Which ONE of the following is the smallest unit of capacity?

A Byte
B Bit
C Gigabyte
D Megabyte

1.8 Which ONE of the following descriptions 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 It forms a small part of the total memory.

1.9 Text can be highlighted by pressing the following combination on a keyboard:

A Ctrl + P
B Ctrl + H
C Ctrl + A
D Ctrl + L

1.10 A computer is off and then switched on.

What is this procedure called?

A Cold boot
B Hot boot
C Sleep
D Log off

(10 × 2) **[20]**

Copyright reserved

QUESTION 2

Indicate whether the following statements are TRUE or FALSE by writing only 'True' or 'False' next to the question number (2.1–2.10) in the ANSWER BOOK.

2.1 Ctrl + X is used for cutting highlighted text.

2.2 Disk copy works only with removable disks, such as floppy disks, which must be of the same type.

2.3 The keyboard and mouse send data toward the CPU only.

2.4 The clock speed of the CPU is measured in millions of cycles per second.

2.5 A laser printer operates on the same principle as a typewriter.

2.6 A modem is used to get access to the Internet via a telephone line.

2.7 The arithmetic logic unit controls the input and output devices.

2.8 The copy and paste commands are used to move a file from one folder to another.

2.9 In the *Control Panel* window the hardware and software settings of the computer can be changed.

2.10 The *Recycle Bin* is a temporary storage area for files deleted from the hard disk.

(10 × 2) **[20]**

QUESTION 3

Choose an item from COLUMN B that matches a description in COLUMN A. Write only the letter (A–G) next to the question number (3.1–3.5) in the ANSWER BOOK.

COLUMN A		COLUMN B	
3.1	Temporary memory of a computer	A	spreadsheet
3.2	Program that can manipulate and analyse numbers	B	Internet
		C	graphical user interface
3.3	Electronic network of computers that includes nearly every university, college, government and research facility in the world	D	tablet
		E	RAM
3.4	Mobile computer with display, circuitry and battery in a single unit	F	email
		G	ROM
3.5	Additional part of an operating system		

(5 × 2) **[10]**

Copyright reserved

QUESTION 4

4.1



4.1.1 Which operating system is used on this computer? (1)

4.1.2 What type of CPU is used in this computer? (1)

4.1.3 What is the clock speed of this computer? (1)

4.1.4 What is the capacity of the RAM on this computer? (1)

4.1.5 To whom is this version of the system software registered? (1)

4.2 Explain how to incorporate a computer into the present farming setup. (5)

4.3 Name FIVE peripherals of a personal computer. (5)

4.4 Give FIVE advantages of a hard disk over a diskette drive. (5 × 2) (10)

[25]

QUESTION 5

5.1	State FIVE roles of an operating system.	(5 × 2)	(10)
5.2	Give TWO examples of each of the following:		
5.2.1	Operating system		
5.2.2	Application system		
5.2.3	Programming language	(3 × 2)	(6)
5.3	State FIVE functions of a mouse.		(5)
			[21]

QUESTION 6

6.1	Explain how viruses enter a computer system.	(5)
6.2	Give FIVE examples of computer viruses.	(5)
		[10]

QUESTION 7

Explain each of the following concepts:

7.1 Firewall

7.2 Computer

7.3 Plagiarism

7.4 Word processing

7.5 Spreadsheet

7.6 Mainframe computer

7.7 Copyright

(7 × 2) **[14]**

TOTAL SECTION A: 120

SECTION B (PRACTICAL)

QUESTION 8: WORD PROCESSING

This section is done on the computer. Use Arial 12 pt.

Your examination number as well as the question number must appear as a header on each printout.

The printouts to be marked must be placed in the cover/folder in the correct sequence. This document has already been keyed in on the data storage device by the computer lecturer.

The name of the document is QUEST 8. The following is a copy of the document saved as QUEST 8.

The original flip-top vial

Protect the farmer and buyer by using leak-proof, airtight and aseptic sample vials.

The research

During the development and testing of mastDecide at the University of Hannover in Germany, four different incubation time schemes were analysed in terms of sensitivity and specificity, as well as negative and positive predictive values.

Researchers also evaluated apparent and true prevalence compared with the conventional microbiological investigation results for 251 clinical mastitis milk samples from 11 dairy farms located in northern Germany.

Evaluation of the tube test results after 14 hours of incubation at a temperature of … results in sensitivity values of 83,6%, 72,2%, and 70, 7% respectively for the three groups (gram-positive cocci, coliform bacteria and no growth or further pathogens). The same tube tests delivered specificity values of 94,1%, 83,3% and 90,8% respectively.

Intermammary antibiotic administration is not advisable in certain cases of clinical mastitis, especially those caused by coliform bacteria and yeasts.

Conclusion

Researchers concluded that mastDecide has the potential to provide a new option for an evidence-based mastitis therapy, with the aim of reducing the future usage of antimicrobials in dairy cows in order to contribute to decreased antimicrobial resistance. 'mastDecide is a patented cow-side test invented at the University of Hannover that allows evidence-based treatment decisions within milking,' says Dr Zieger. 'It is faster than any other comparable test, is easy to apply and delivers highly accurate results.'

Copyright reserved

8.1 Open the document saved as QUEST 8 and insert your EXAMINATION NUMBER left and the QUESTION NUMBER right as header. (2)

8.2 Change the main heading to Algerian size 14, uppercase, centre and bold. (4)

8.3 Change the paragraph below the main heading to centre and italics. (2)

8.4 Bold the subheading 'The research'. (2)

8.5 Paragraph 'evaluation …': replace the ellipse (…) by **37 °C** (temperature of 37 °C results) (2)

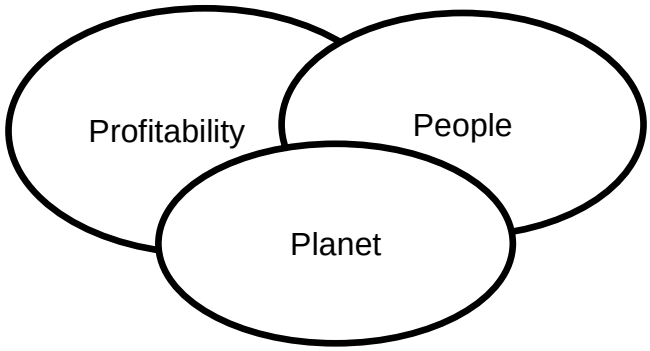
8.6 The third paragraph under the subheading 'The research': double line spacing, italics, bold and underline. (2)

8.7 Insert a page break before the subheading 'Conclusion'. (2)

8.8 Change the subheading to uppercase, bold and centre. (3)

8.9 Change the format of the last paragraph to two columns. (2)

8.10 Insert the following below the two-columns paragraph:



(6)

8.11 Insert page numbering starting from 6. (2)

8.12 Save the document and make a printout. (1)

[30]

QUESTION 9A: SPREADSHEET

9.1 Create the following document in the spreadsheet program. Use the exact cell references as indicated.

	A	B	C	D	E
1	TAX INVOICE		Invoice no.:	C0008	
2	CASH CROP FARM		Date:	39234	
3	PO BOX 1020		Tel. No.:	015-9637000	
4	POLOKWANE		Payment Method:	Cash	
5					
6	Name:	Mr Munonde B			
7	Address:	PO Box 134			
8	Town:	SONGWANE			
9	Code:	0920			
10					
11	Units	Title	Unit Price	Amount	
12					
13	3	Brinjals	91,99		
14	4	Runner beans	137,99		
15	2	Sunflower	139,14		
16	1	ASGROW	102,34		
17	5	Pioner Seed	91,99		
18	4	Lucerne	102,99		

(5)

9.2 Insert your EXAMINATION NUMBER and QUESTION 9A on the right-hand side as a header. (2)

9.3 Adjust the column to fit all the data as indicated. (1)

9.4 Save the document as QUEST 9A.

9.5 Print the document on A4 portrait with row and column headings and the gridlines. (2)

[10]

Copyright reserved

QUESTION 9B: SPREADSHEET

9.6 Retrieve the document QUEST 9A and immediately save it as QUEST 9B. Change QUESTION 9A to 9B.

	A	B	C	D
1	**TAX INVOICE**		**Invoice no.:**	**C0008**
2	**CASH CROP FARM**		**Date:**	**39234**
3	**PO BOX 1020**		**Tel. No.:**	**015-9637000**
4	**POLOKWANE**		**Payment Method:**	**Cash**
5				
6	*Name:*	*Mr Munonde B*		
7	*Address:*	*PO Box 134*		
8	*Town:*	*SONGWANE*		
9	*Code:*	*0920*		
10				
11	UNITS	TITLE	UNIT PRICE	AMOUNT
12				
13	3	Brinjals	R 91,99	**A**
14	4	Runner beans	R 137,99	
15	2	Sunflower	R 139,14	
16	1	ASGROW	R 102,34	
17	5	Pioner Seed	R 91,99	
18	4	Lucerne	R 102,99	
19			Total	**B**
20			Discount	**C**
21			Insurance	**D**
22			Subtotal	**E**
23			VAT	**F**
24			Amount Due	**G**
25				

(1)

9.7 Change the appearance of row 1 to row 4 to bold. (2)

9.8 Row 6 up to row 9: change to italics. (2)

9.9 Format the headings in row 11 to font Castellar and colour background tan, background 2, darker 10%. (4)

9.10 Insert the information in column C as indicated below row 18. (3)

9.11 Give the formula and/or function for the cells marked with the letter of the alphabet. Use cell references and absolute addresses where applicable.

A Amount = Unit price multiply by units

B Total = Total sum of amount

C Discount = Total multiply by 5%

D Insurance = Total multiply by 3%

E Subtotal = Total minus discount plus insurance

F VAT = Subtotal multiply by 15%

G Amount due = Subtotal plus VAT

(7 × 2) (14)

9.12 Display all figures that represent money with the R sign and 2 decimal places. (2)

9.13 Print the document on A4, portrait-oriented and without row and column headings or gridlines. (2)

[30]

QUESTION 9C: SPREADSHEET

9.14 Retrieve the document QUESTION 9B and immediately save it as QUESTION 9C.

9.15 Display the formulae. (6)

9.16 Change the question number in the header to QUESTION 9C. (1)

9.17 Adjust the column widths. (1)

9.18 Save and print the document on A4, landscape-oriented with the row and column headings but without gridlines. (2)

[10]

TOTAL SECTION B: 80
GRAND TOTAL: 200

Copyright reserved