higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE

DATA MANAGEMENT: FARMING N4

(4090454)

13 November 2019 (X-Paper)
09:00–12:00

This question paper consists of 16 pages.

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DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA

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

TURN THE PAGE FOR THE INSTRUCTIONS.
YOU HAVE 25 MINUTES TO READ THE INSTRUCTIONS.

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INSTRUCTIONS TO INVIGILATORS AND CANDIDATES

READ THE FOLLOWING INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING TO ANSWER THE PAPER-INVIGILASTORS WILL EXPLAIN, IF NECESSSARY.

1. The question paper comprises of TWO sections, namely:

   SECTION A: Theory (120 marks)

   SECTION B: Word Processing/Text Manipulation and Spreadsheet and Database (80 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 the computer with the aid of word processing spread sheet and database program. Each PRINTOUT must have both the EXAMINATION NUMBER and the question number printed EITHER as header or footer (as per instruction). Hand written 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 tear the pages apart before handing in.

2. The time allocated for the question paper is 3 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; send a report with your centres' answer sheets.

6. A candidate may have in his/her possession a typing ruler, a dictionary and a list of ASCII codes. Spell check may be used.

7. 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 FOLDERS immediately.

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.

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9. At the conclusion of the examination session ALL printouts which a candidate wishes TO BE MARKED, must be placed in the examination folder and ALL OTHER PRINTSOUTS, together with the EXAMINATION FOLDER, MUST be handed to 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 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 into number order.

11. 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.

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 responsibility to protect their 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 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, 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 safe keeping (for ONE year).

15. NOTE that 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 candidate at the end of the last session.

16. 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.

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17. 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.

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SECTION A

QUESTION 1

1.1 Various options are given as possible answers to the following questions. 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 following is NOT an example of removable media:

A Diskette
B flash disk
C tape cartridge
D hard disk

1.1.2 A device that fits into your hand and it is rolled on the surface next to the computer.

A Mouse
B Track ball
C camera
D joystick

1.1.3 … is used to erase the file or files.

A Disk copy
B Rename
C Rewrite
D Delete

1.1.4 This is a device that reads text, images or graphics on paper and converts them into machine-readable characters.

A Scanner
B pop-out mouse
C stylus
D joystick

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1.1.5 Related information is stored on a flash drive or disk in the form of …

A Extension
B files
C windows
D management

1.1.6 Which ONE of the following symbol may not be used in file names?

A %
B ( )
C #
D ?

1.1.7 The shortcut combination command for paste using keyboard is by pressing …

A Ctrl + p.
B Shift + p.
C Ctrl + v.
D Shift + p.

1.1.8 This type of printer makes physical contact with the paper.

A Impact printer
B Non-impact printer
C Ink jet printer
D Thermal printer

1.1.9 Type of education where online computer is used as medium of instruction.

A Electronic mail
B e-learning
C instant messaging
D mobile technology

1.1.10 … is an illegal operation whereby criminals send fake emails in order to obtain personal banking and other details from recipients.

A Copyright
B Security
C Phishing
D Private network

(10 × 2) (20)

1.2 Choose an item from COLUMN B that matches a description in COLUMN B. Write only the letter (A–H) next to the question number (1.2.1–1.2.7) in the ANSWER BOOK.

COLUMN A		COLUMN B	
1.2.1	Connection is over a short distance	A	no power at the monitor and the screen stays black
1.2.2	File is read only	B	cabling
1.2.3	Check the cables from the monitor to the CPU	C	firewall
1.2.4	Most common source of potential computer problem	D	symptom of a virus
1.2.5	Suspicious system functioning	E	Trojan horse
1.2.6	Computer virus	F	virus wall
1.2.7	Detect and remove virus via internet	G	access denied
		H	LAN

(7 × 2) (14)

1.3 Indicate whether the following statements are TRUE or FALSE. Choose the answer and write 'True' or 'False' next to the question number (1.3.1–1.3.10) in the ANSWER BOOK.

1.3.1 A window error message is a message to warn the operator that everything is okay and he/she can progress with his work.

1.3.2 An example of a Boot-sector Virus is the Israeli virus.

1.3.3 Tablet PC is a flat-panel portable PC in the form of a slate with a removable keyboard.

1.3.4 A joystick is an example of input and output device.

1.3.5 The Trojan Horse is an anti-virus software package.

1.3.6 ASCII is the acronym for American Standard Computer for Internal Interchange.

1.3.7 Using diskettes from unknown sources to exchange data could lead to the spread of a computer virus.

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1.3.8 A Graphic User Interface is an additional part of the operating system.

1.3.9 Hardware refers to those parts of computer that you can see and touch.

1.3.10 A blog is a Web site with regular entries of commentary, description of events or other material such as graphic or video.

(10 × 2) (20)
[54]

QUESTION 2

Define each of the following terminology:

2.1 Software piracy

2.2 Ergonomics

2.3 Virus

2.4 Freeware

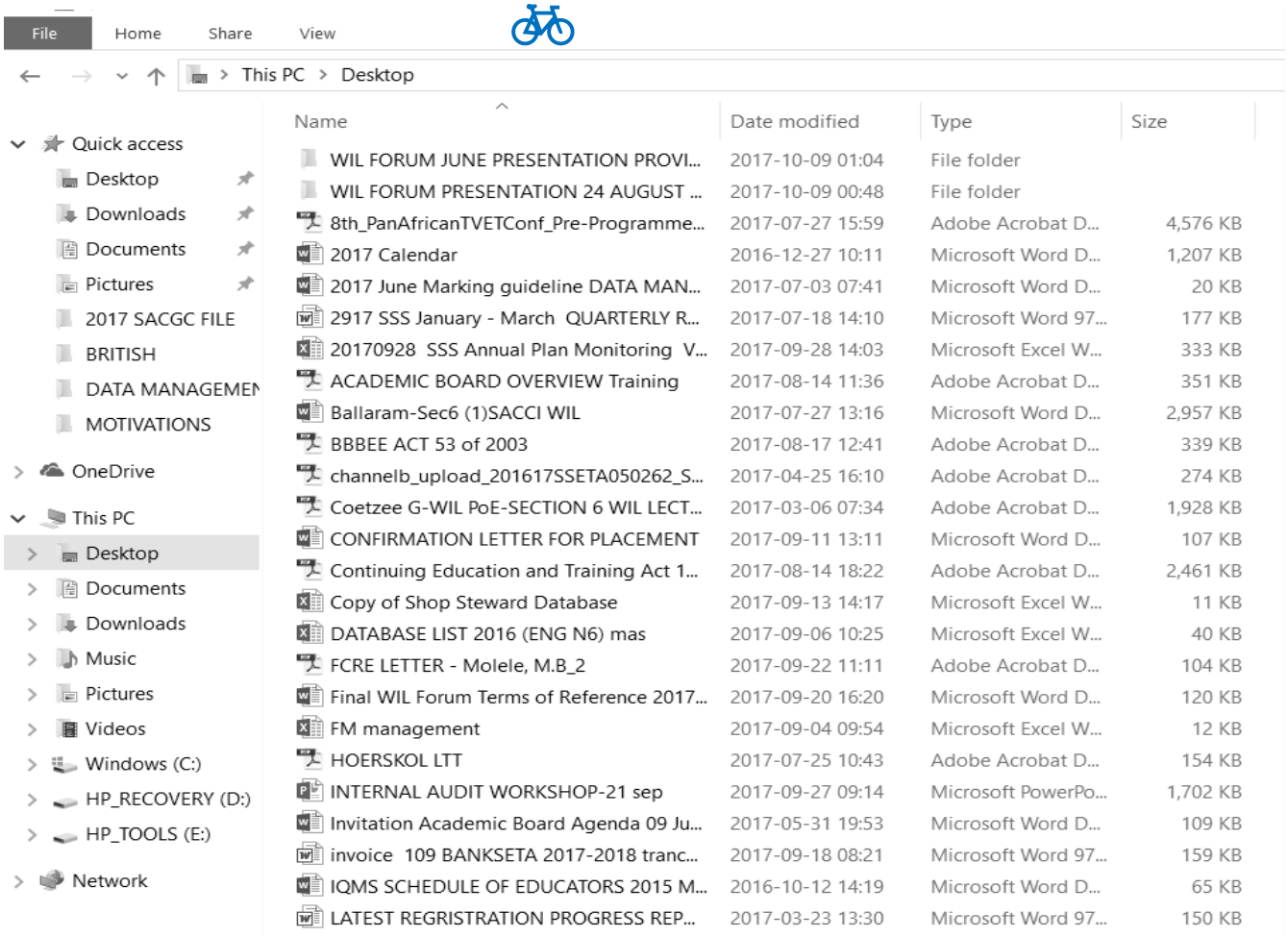
2.5 Spread sheet

2.6 Twitter

(6 × 2) **[12]**

QUESTION 3

Study the picture below and answer the questions.



3.1 How many folders displayed by this desktop view? (2)

3.2 Mention the biggest file in this view. (2)

3.3 Write down the extension of the following files from this view.

3.3.1 HOERSKOOL LTT

3.3.2 INTERNAL AUDIT WORKSHOP

3.3.3 FM management

3.3.4 Ballaram-sec6 (1) SACCI WIL

(4 × 2) (8)

3.4 When was BBBEE ACT 53 of 2003 created? (2)

[14]

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QUESTION 4

4.1	Mention FIVE precautions you will take against computer viruses.	(5 × 2)	(10)
4.2	Name any FIVE kinds virus.		(5)
4.3	Mention any FIVE examples of input devices.		(5)
4.4	What are main advantages of a GUI interface?	(4 × 2)	(8)
			[28]

QUESTION 5

What does the following keyboard shortcut used for?

5.1 Ctrl + End

5.2 Page up

5.3 Ctrl + Z

5.4 Ctrl + A

5.5 Ctrl + Home

5.6 Ctrl + →

(6 × 2) **[12]**

TOTAL SECTION A: 120

SECTION B: (PRACTICAL)

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

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

The printouts you want to be marked must be placed in the cover/folder in the CORRECT SEQUENCE.

WORD PROCESSING

QUESTION 6

This document has already been keyed in by the computer lecturer on the data diskette. The name of the document is QUEST 6. The following is a copy of the document saved as QUEST 6.

Focus on soil

'In soil science, increased carbons and organics are the best way to make the soil sustainable. Every time you disc the land, you lose carbon, organics and minerals so we want as little intervention as possible' James says.

The different pasture species offer different attributes such as nitrogen fixing and deep tap roots. The end result is higher levels of nitrogen, reduced soil compaction, improved soil structure and greater soil biodiversity.

'Ten years ago, root penetration in pastures was only 200 mm below the surface. Now, roots penetrate to a depth of 1.5 m, and the dark carbon profile is now about 1m deep. When the roots die off, this creates channels which are used to supply air to microorganisms and allow water and nutrients to penetrate further down the soil profile' says James

Carbon levels in the soil have improved significantly from under 2% in 2007 to 4.65% in 2017. 'This is creating a good micro-environment so we can reduce applications of weedicides and pesticides. We've also cut nitrogen use to 340 to 400 kg/year. Nitrogen application is a bit of a balancing act: if we pull too much we reduce the grazing mass and root structure. So we try to find the ultimate sweet spot.

The higher carbon level has a important effect on soil water-holding capacity. 'The water-holding capacity in the top 30cm of soil has jumped from 320 000 ℓ/ha (1,15 carbon) to 1562 500 ℓ/ha (4.65% carbon), according to our soil consultant, Francis Yeatman. This allows us to optimize irrigation and save the electricity costs associated with pumping.

Table 1 Effect of increased soil carbon content on soil water-holding capacity, measured to a depth of 30 cm. (source: Francis Yeatman)

The benefit of reduced water usage is keenly appreciated in times of drought. With 50% water restrictions in Mooi River catchment area, the drought has compelled the Keans to make some painful changes over the past 18 months.

6.1 Open the document, save as QUEST 6 and insert your EXAMINATION NUMBER left and QUESTION NUMBER right as header. (2)

6.2 Change the entire document to Arial 12pt. (1)

6.3 Change the margin of the entire document to 2.54 cm left and right. (1)

6.4 Change the main heading: 'Focus on soil' to uppercase, bold and size 16pt. (3)

6.5 Change the first paragraph to italics and 2.0 line spacing. (2)

6.6 Change paragraph two and three to three column paragraphs with a line in between. (3)

6.7 Below the paragraph 'Table 1 Effect … 'insert this table, this table should be Grid Table 4 style. Use insert symbol Normal text character code 2113 to find 'ℓ'

Year	% Carbon	Retained Water
1998	1.16%	320 000 ℓ/ha
2007	2.23%	640 000 ℓ/ha
2012	3.50%	1 000 000 ℓ/ha
2016	4.65%	1 562 500 ℓ/ha

(10)

6.8 Change the paragraph 'Table 1 Effect ------' to Bold and Italics (2)

6.9 In the last paragraph, Drop Cap the first letter T (2)

6.10 Insert page numbering bottom centre starting at 4 (3)

6.11 Make a print out in portrait on one page (1)

[30]

SPREADSHEET

QUESTION 7A

7.1 Create the following document in the spread program. **USE THE EXACT CELL REFERENCES AS INDICATED.** (6)

	A	B	C	D	E	F
1	INCOME STATEMENT 2017: LINDIWE FARM					
2						
3		Quarter 1	Quarter 2	Quarter 3	Quarter 4	TOTAL
4	Net sales	12000	19000	16000	22000	
5	Costs and Expenses					
6	Salary	2000	2000	2000	2500	
7	Interest	1200	1400	1600	1600	
8	Rent	600	600	600	600	
9	Adverting	900	2000	4000	4500	
10	Sales costs	4000	4200	5000	8000	
11	Operating Expenses					
12	Operating Income					

7.1.1 Insert your EXAMINATION NUMBER and QUESTION 7A on the right-hand side as a header. (2)

7.1.2 Adjust the column to fit ALL the data. (2)

7.1.3 Save the document as QUEST 7A

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

QUESTION 7B

7.2 Retrieve the document QUEST 7A and immediately as QUEST 7B. Also change Question 7A to 7B.

	A	B	C	D	E	F
1	**INCOME STATEMENT 2017: LINDIWE FARM**					
2						
3		Quarter 1	Quarter 2	Quarter 3	Quarter 4	TOTAL
4	***Net sales***	12000	19000	16000	22000	**B**
5	*Costs and Expenses*					
6	*Salary*	2000	2000	2000	2500	**B**
7	*Interest*	1200	1400	1600	1600	
8	*Rent*	600	600	600	600	
9	*Adverting*	900	2000	4000	4500	
10	*Sales costs*	4000	4200	5000	8000	
11	*Operating Expenses*	**A**				
12	*Operating Income*	**C**				

(2)

7.2.1 Merge and centre cell range A1–F1 and change the font to Bodoni MT Black 16pt. (4)

7.2.2 Change Net Sales in A4 to bold and underline Costs and Expenses in A5. (4)

7.2.3 The text in column A, excluding the main heading should be printed in italics. (2)

7.2.4 Give the answers for each of the following alphabets.

A Calculate the total of Operating Expenses. (2)
B Sum of the TOTAL of all (2)
C Operating Income is equal to Net sales minus Operating Expenses (2)

7.2.5 Display ALL amount as currency with two decimals (2)

7.2.6 Add a 25% grey cell shading and a thick bottom line to the headings Quarter 1 to Total. (2)

7.2.7 Add a double-line outline boarder to the range of Operating Income, from Quarter 1 to Total (2)

7.2.8 Print the document on A4 landscape without row and column headings or the gridlines. (2)

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QUESTION 7C

7.3	7.3.1	Display the formulae.	(3 × 2)	(6)
	7.3.2	Change the question number in the header to QUESTION 7C		(2)
	7.3.3	Adjust the column widths.		(2)
	7.3.4	Save and print the document in landscape without the row and column headings or gridlines. The document must fit on two A4 pages.		(2)
				[50]

TOTAL SECTION B:	**80**
GRAND TOTAL:	**200**

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