higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

N300**(E)**(M27)H

NATIONAL CERTIFICATE

DATA MANAGEMENT: FARMING N5

(4090465)

27 May 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: FARMING N5
TIME: 3 HOURS
MARKS: 200

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

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NATIONAL CERTIFICATE
DATA MANAGEMENT: FARMING N5
TIME: 3 HOURS
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INSTRUCTIONS AND INFORMATION

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

   SECTION A: Theory (100 marks)

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

   SECTION A must be answered in the ANSWER BOOK, which 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, spreadsheet and database programs. Each PRINTOUT must have the EXAMINATION NUMBER and the QUESTION NUMBER printed either as a header or a footer (as per instruction). Handwritten examination numbers and question numbers are NOT acceptable. The PRINTOUTS must be put in the folder in the correct sequence. Candidates using continuous paper must tear the pages apart before handing them 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 centre's 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 folder immediately.

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8. Do NOT staple answer sheets together. Marks will be subtracted for printing on both sides of the paper, as well as stapling answer sheets.

9. At the conclusion of the examination session, ALL PRINTOUTS that 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 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 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 numerical order.

11. PRINTOUTS may be 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 for lost work. It is the candidate's responsibility to protect their answers from obliteration.

13. In order to print the original and the edited attempts of the answers, candidates are reminded to save their work after each 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 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 safekeeping (for ONE year).

15. Note that NO paper may be taken out of the examination room, including question papers. ALL sheets of paper must be handed in. Question papers may be given to candidates at the end of the last session.

16. In the event of an examination paper being examined in more than one session, the invigilators must ensure that all the candidates' answers are removed from the hard disks or the network before the 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**.**

18. 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 Choose a term from COLUMN B that matches a description in COLUMN A. Write only the letter (A–L) next to the question number (1.1.1–1.1.10) in the ANSWER BOOK.

COLUMN A		COLUMN B	
1.1.1	The set of instructions that guides hardware to function	A	virus
1.1.2	Pointing device that can be used instead of a keyboard to move the cursor	B	speakers
1.1.3	Unique codes given to every user to access a network	C	electronic mail
1.1.4	Light-sensitive pen used to create diagrams or graphics on a screen	D	operating system
1.1.5	Parasite software programs that can replicate themselves	E	tablet
1.1.6	Type of education where an online computer is used as the medium of instruction	F	impact printer
1.1.7	Has a carbon ribbon and characters are hammered on paper	G	uninterruptable power supply
1.1.8	Output devices that transmit sound from a computer	H	non-impact printer
1.1.9	A flat-panel portable PC in the form of slate with a removable keyboard	I	e-learning
1.1.10	Protects the user against data loss due to an unexpected power failure	J	stylus
		K	password
		L	mouse

(10 × 1) (10)

1.2 Which programs are represented by each of the following file extensions:

1.2.1 .rtf

1.2.2 .html

1.2.3 .tmp

1.2.4 .accdb

1.2.5 .xlsx

1.2.6 .wav

1.2.7 .docx

1.2.8 .pdf

1.2.9 .bmp

1.2.10 .zip

(10 × 1) (10)

1.3 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 (1.3.1–1.3.10) in the ANSWER BOOK.

1.3.1 Which ONE of the following describes a firewall?

A Use passwords to protect document
B Secures the computer by physically locking it
C Antivirus programme blocking viruses
D Guard that blocks out unwanted traffic

1.3.2 The speed information is transferred in a given time:

A Information Transfer Speed
B Cannot be expensive
C Data Transfer Rate
D Information Transfer Rate

1.3.3 The best way to protect a computer against data loss:

A Shut down the computer
B Make regular backups
C Do not use weblogs
D Change passwords

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1.3.4 To avoid health risks when working on a computer for long hours, the following must be done:

A Do not take regular breaks as it wastes your working time.
B Do not get fresh air as the bright sunlight will damage your eyes.
C Use an adjustable backrest to lay backwards during off times.
D Close your eyes and blink regularly.

1.3.5 Device which will most likely be used to digitise photographs:

A Scanner
B Joystick
C Serial port
D Touchpad

1.3.6 A characteristic of a broadband connection:

A Need a 56k modem to connect
B Uploading music files
C Getting more expensive, the longer the connection
D Fast connection that is always on

1.3.7 To ensure that a password stays secure, which one of the following should be taken into consideration?

A Pick a password that someone can guess easily
B Pick a password that is similar to a previous one
C Pick a mixture of letters, numbers and symbols
D The shorter a password, the better

1.3.8 A large, expensive, high-performance computer:

A Laptop computer
B Mainframe computer
C Personal computer
D Minicomputer

1.3.9 ISP stands for:

A Internet Service Provider
B Inside Server Provider
C Intruder Service Port
D Internet Speed Provider

1.3.10 Which ONE of the following is made up of EIGHT characters?

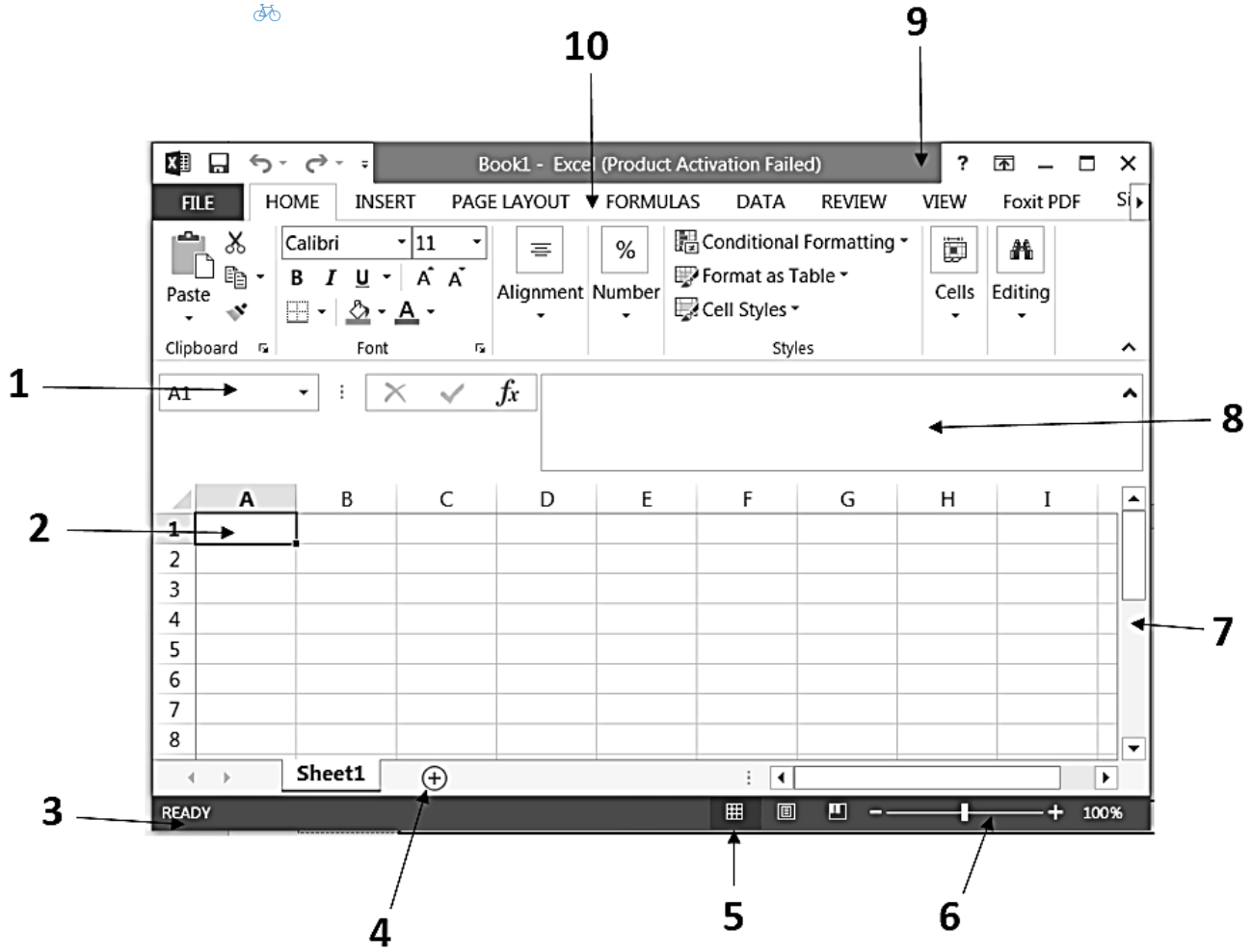
A Megabyte
B Terabyte
C Gigabyte
D Byte

(10 × 1) (10)
[30]

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QUESTION 2

2.1 The screenshot below shows an application window and a maximised workbook area. Fill in the features marked 1 to 10.



(10 × 1) (10)

2.2 Define each of the following:

2.2.1 Database

2.2.2 Creditor

2.2.3 Disk copy

2.2.4 Debtor

2.2.5 Invoice

2.2.6 User account

(6 × 2) (12)
[22]

QUESTION 3

3.1 What is the function of each of the following devices?

3.1.1 Keyboard

3.1.2 Printer

3.1.3 Mouse

3.1.4 CPU

3.1.5 Monitor

(5 × 2) (10)

3.2 What happens when the right mouse button is clicked? (2)

3.3 What is the correct procedure to shut down a computer? (6)

3.4 Name any FOUR sections found on a keyboard. (4 × 2) (8)

[26]

QUESTION 4

4.1 Files infected with a virus can be disinfected.

List the steps that may be followed with antivirus programmes. (10)

4.2 State TWO examples of antivirus software. (2)

4.3 Draw a schematic representation of Input Processing Output. (10)

[22]

TOTAL SECTION A: 100

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SECTION B: (PRACTICAL)

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

Your EXAMINATION NUMBER and 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 1

The computer lecturer has already keyed this document, namely QUEST1, onto the data diskette. The following is a copy of the document saved as QUEST1.

Tobacco & Clove business

Taufan Suharsono is the successor of CV Restu Sejati, a family-owned business called Tobacco & Clove, which was founded by his grandfather in 1959. The company is present in more than 10 regions across Indonesia. In 2014, Taufan's company initiated the Sustainable Sourcing project in order to establish a long-term relationship with the farmers by providing financial and technical support in order to increase their productivity, efficiency, product quality and living standard through sustainable farming methods. Taufan's company currently employs 39 permanent employees and more than 300 seasonal workers across seven buying stations in Indonesia.

Managing production for some of the largest buying companies in the world can be a very challenging task, especially if there is a need for complete traceability, which will ensure buyers' trust in the origin, quality and production practices of each farmer the produce is bought from. Having a tool that can help in an efficient way should be a primary focus if long-term sustainability is to be ensured.

Large agricultural corporations are faced with a great challenge of ensuring sufficient quantity in order to keep their production going, which is why they work with farmers, often smallholders too, in order to ensure that their ever-growing demand is met. The challenge is in securing a large enough quantity, which is traceable and meets the necessary quality standards.

"Trust me, [Company we are selling to] has the strictest standard when it comes to quality and integrity assurance in their supply chain. It is important to have a farm management system, which can bring information directly from the field. It will be more accurate, easier, flexible and efficient for us. In my case, because our field techs have the ability to input data from the field, they don't have to go to the main office to input data. The field locations are scattered in several regions far from the office, which means that our field techs will have more time to monitor and support the farmers in the field." ~ Taufan Suharsono

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Long-term farming sustainability comes from using the latest and best production practices for each crop. For farmers, having access to knowledge is vital in this case, and easy access to that knowledge is always an advantage. Sound production practices also include the need to keep track of production costs, which includes managing farming input, fertilisers, pesticides, labour, machinery and other crop-related costs. Ensuring that all these boxes are ticked will undoubtedly ensure a competitive edge through increased quality, more cost-effective production and complete traceability. Introducing traceability from the field is only possible through the implementation of the latest farm management technologies. What better way is there than to adopt a cloud-based solution, which is complete and powerful, yet easy to use and multilingual?

Additionally, one of the most important aspects of adopting new technology in an ever-growing business is scalability so that solutions that are long-term investments are able to scale up significantly in order to support a company in all stages of its growth. There are always challenges when adopting new technology, however, successfully adopting farm management software seals the traceability black hole, which is currently present in the food sourcing industry where there are no actual, easily accessible data satisfying necessary traceability standards.

"With the ability to gather and store substantial information from every phase of the production process, we can easily trace who is the grower, where and when the crop was planted, what crop input and active substances were used, when it was harvested, how much cash the grower earned and what practices were used to produce the products." ~ Taufan Suharsono

Industry leaders, such as Taufan, are the bringers of change. Their responsibility is also two-fold; towards their buyer, but also towards the farmer. Taufan's role is to provide value on all sides, ultimately improving the livelihood of the farmers as well.



1.1 Open the document, save it as QUEST1 and insert your EXAMINATION NUMBER on the top left-hand side of the page and the QUESTION NUMBER as a header on the right-hand side of the page. (1)

1.2 Change the main heading to bold, spaced cap and size 18pt. (4)

1.3 Change the two column paragraphs to one column. (2)

1.4 Delete the fourth paragraph. (2)

1.5 In the fourth paragraph, change the first letter to a drop cap. (2)

1.6 Insert a page break after the third paragraph. (2)

1.7 Insert page numbering at the bottom centre, starting at 8. (2)

1.8 Change the appearance of the last paragraph by inserting a paragraph boarder (double line boarder). (2)

1.9 Move the picture and place it above the main heading. (2)

1.10 Save the document, make a printout and place it in your folder. (1)

[20]

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SPREADSHEET

QUESTION 2A

2.1 2.1.1 Create the following document in Excel. USE THE EXACT CELL REFERENCES AS INDICATED. (6)

	A	B	C	D	E	F
1	CLOCK CARD: MOLOLO JAN					
2						
3	WEEK ENDING: 2016-09-11					
4						
5						
6		Morning		Afternoon		
7		In	Out	In	Out	TOTAL
8						
9	Monday	07:55	12:55	14:00	17:00	
10	Tuesday	07:05	12:05	14:00	17:00	
11	Wednesday	07:35	12:05	14:00	17:00	
12	Thursday	07:45	13:15	14:00	17:00	
13	Friday	06:58	12:58	14:00	16:00	
14						
15	TOTAL					
16	Overtime					
17	Saturday	08:00	12:00	15:30	17:30	
18	Sunday	09:00	12:00			

2.1.2 Insert your EXAMINATION NUMBER and QUESTION 2A as a header on the right-hand side at the top of the page. (2)

2.1.3 Adjust the column to fit ALL the data, as indicated. (2)

2.1.4 Save the document as QUEST2A. (2)

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

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QUESTION 2B

2.2 2.2.1 Retrieve the document QUEST2A and immediately save it as QUEST2B. Change QUESTION 2A to 2B. (2)

2.2.2 Insert the column headings, as indicated below. (2)

	A	B	C	D	E	F
1	**CLOCK CARD: MOLOLO JAN**					
2						
3	WEEK ENDING:	2016-09-11				
4						
5						
6		Morning		Afternoon		
7		In	Out	In	Out	TOTAL
8						
9	Monday	07:55	12:55	14:00	17:00	A
10	Tuesday	07:05	12:05	14:00	17:00	
11	Wednesday	07:35	12:05	14:00	17:00	
12	Thursday	07:45	13:15	14:00	17:00	
13	Friday	06:58	12:58	14:00	16:00	
14						
15	TOTAL					C
16	Overtime					
17	Saturday	08:00	12:00	15:30	17:30	B
18	Sunday	09:00	12:00			B
19						
20	TOTAL					D

2.2.3 Merge and centre cell range A1–F1 and change the font size to 20pt. (3)

2.2.4 Add the formulae to complete the spreadsheet. (5)

A Use the time to determine the duration of normal time worked for each day until Friday. Format the answer to display one decimal number. (2)

B Overtime was worked on Saturday and Sunday. Format the answer to display one decimal number. (2)

C Total hours worked during working days (Monday–Friday). (2)

D Total hours worked on the weekend. (2)

2.2.5 Insert horizontal and vertical lines, as indicated, with the method you are familiar with. (2)

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2.2.6 Apply shading of *Grey 25%, Background 2* in row 15. (2)

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

QUESTION 2C

2.3 2.3.1 Retrieve the document QUEST2B and immediately save it as QUEST2C. Change QUESTION 2B to QUESTION 2C. (2)

2.3.2 Display ALL formulae and adjust the column widths so that ALL formulae are visible. (6)

2.3.3 Print the document in landscape without the row and column headings. The document should fit onto one A4 page in landscape. (2)

[50]

DATABASE

QUESTION 3

3.1 3.1.1 Open the database program and create a database called **SALARY** and **YOUR EXAMINATION.**

3.1.2 Create a table and name it as follows: NET SALARY QUESTION 3B EXAMINATION NUMBER.

3.1.3 Use the field names and formatting, as indicated below.

FIELD NAME	INFORMATION
PART NUMBER	Consists of a maximum of 20 characters
PART NAME	Consists of a maximum of 30 characters
NO IN STOCK	Number (integer)
AMOUNT	Currency
DATE	Short date

3.1.4 Save the information and make a PRINTOUT of the structure. Do NOT print any properties. (10)

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3.2 Key the following records into the table:

PART NUMBER	PART NAME	NO IN STOCK	AMOUNT	DATE
35	Monitor	11	R 2 500.00	2016/12/04
58	MODEM	12	R 350.00	2017/01/10
65	SCANNER	8	R 1 500.00	2017/01/11
74	FLASH DISK	9	R 100.00	2016/12/15

Save the document and make a printout of all the records. The PRINTOUT must fit on an A4 page in landscape. (10)

3.3 Create a report with parts costing more than R1 000,00 using the following fields:

Part Number, Part Name, Amount and No in Stock.

3.3.1 Calculate the TOTAL AMOUNT of displayed parts.

3.3.2 Display the following information in the header of the report.

Your EXAMINATION NUMBER and NEW STOCK

3.3.3 Save as Quest3B and make a PRINTOUT. (10)
[30]

TOTAL SECTION B: 100
GRAND TOTAL: 200

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