



higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

N310(E)(J14)H

NATIONAL CERTIFICATE

DATA MANAGEMENT: FARMING N6

(4090476)

**14 June 2018 (X-Paper)
09:00–12:00**

This question paper consists of 17 pages.

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

INSTRUCTIONS TO INVIGILATORS AND CANDIDATES

CANDIDATES HAVE 25 MINUTES TO READ THE INSTRUCTIONS

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 and spreadsheet and database (120 marks)
2. SECTION A must be answered in the ANSWER BOOK which must be placed on top of 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 both the EXAMINATION NUMBER and the QUESTION NUMBER as header or as footer as instructed. Handwritten EXAMINATION NUMBERS and QUESTION NUMBERS are NOT acceptable.
3. PRINTOUTS may be on A4 paper or on continuous computer paper unless a specified size of paper is required in a question or a letterhead is supplied. The PRINTOUTS must be placed in the folder in the correct sequence. Marks will be deducted for answer sheets NOT in the correct order.
4. Candidates using continuous paper must separate the pages before handing them in.
5. NO additional printing time is allowed.
6. 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.
7. If there is a problem with certain printers, for example it does not print ë; a report must be sent with the centre's ANSWER SHEETS.

8. A candidate may have in his/her possession a typing ruler, a dictionary and a list of ASCII codes. A spelling checker may be used.
9. Each answer must be printed on a separate sheet of paper and on ONE side of the paper only.
10. 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.
11. 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 wastepaper 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.
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 the answers from obliteration.
13. In order to print the original as well as the edited 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 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 candidates must create a folder on the computer and save the work in that folder which is named using the EXAMINATION NUMBERS. The invigilators will save the folders on a USB and submit the USB to the examination section for safe keeping for ONE year.
15. 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.

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 Function key used to check spelling and grammar in the Microsoft Word application:

- A F12
- B F7
- C F1
- D F4

1.1.2 Basic operation performed by a computer:

- A Arithmetic operation
- B Logical operation
- C Storage
- D All the above-mentioned

1.1.3 Which ONE of the following is NOT purely an output device?

- A Screen
- B Printer
- C Speaker
- D Plotter

1.1.4 ... are used to produce high-quality, hard-copy graphics in colour.

- A RGB monitors
- B Plotters
- C Ink-jet printers
- D Laser printers

1.1.5 Which ONE is NOT an ergonomic principle a computer user must consider when using a computer?

- A Enough indirect light
- B Good ventilation
- C Chair with wheels
- D Distance and height to the screen

- 1.1.6 ... means illegally duplicating copyrighted software.
- A Data Publicity Law
 - B Software piracy
 - C Data Protection Act
 - D Copyright
- 1.1.7 Which ONE of the following storage devices can store a maximum amount of data?
- A Hard disk
 - B Floppy disk
 - C Compact disk
 - D Magneto optic disk
- 1.1.8 Which ONE is a valid and more precise statement?
- A 1 KB = 1 024 bytes
 - B 1 MB = 1 024 bytes
 - C 1 KB = 1 000 bytes
 - D 1 MB = 1 000 bytes
- 1.1.9 Modern computers are very reliable but they are not ...
- A fast.
 - B powerful.
 - C cheap.
 - D infallible.
- 1.1.10 A CD-ROM is a type of multimedia because text, images and ... are stored on these disks.
- A programs
 - B files
 - C sound
 - D letters

(10 × 2) (20)

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

COLUMN A		COLUMN B	
1.2.1	External bus standard enabling data transfer rate of 12 Mbps	A	parallel
1.2.2	Devices attached to CPU	B	processor
1.2.3	Needed for sound and 3D surrounding	C	fire wire port
1.2.4	Brain of the PC	D	CD and DVD-ROMs
1.2.5	Allows asynchronous transmission of data characters (one bit at a time)	E	speakers and soundcards
1.2.6	Also known as iLink	F	peripherals
1.2.7	Multiple holes housing the prongs	G	serial port
		H	memory
		I	USB port

(7 × 1) (14)

- 1.3 Name FIVE ways to prevent computer fraud in a farming business.

(10)

[44]

QUESTION 2

- 2.1 Briefly explain each type of network below by which TWO or more computers can be linked so that they can share hardware or information.

- 2.1.1 Local area network (LAN)
- 2.1.2 Personal area network (PAN)
- 2.1.3 Campus area network (CAN)
- 2.1.4 Wireless local area network (WLAN)
- 2.1.5 Metropolitan area network (MAN)

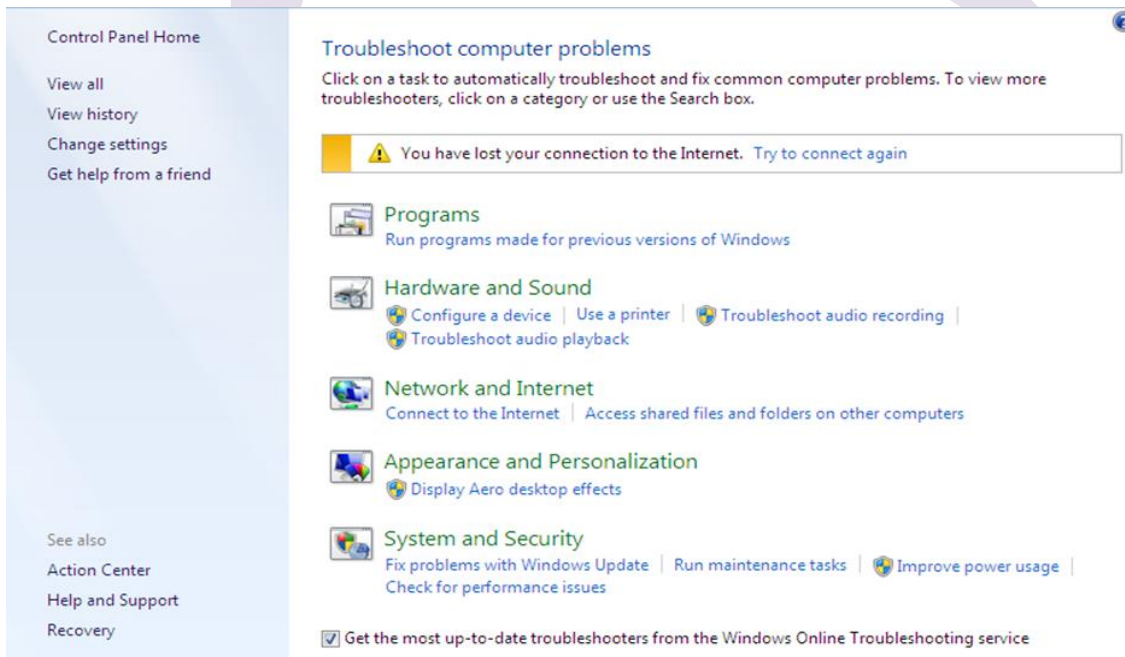
(5 × 2) (10)

- 2.2 Ergonomics is a field of technology that considers human capabilities and limitations in the design of machines and equipment that people use, and the environments in which they operate.

Give FIVE reasons why ergonomics should be considered in the designing of machines and equipment used in workplaces. (10)
- 2.3 Identify the formal steps taken when buying computer hardware for business concerns. (5)
- 2.4 Discuss any TWO methods in which a farmer might pay for computers purchased for the farm. (2 x 3) (6)
[31]

QUESTION 3

Activate the troubleshoot window below on your computer. Make a screen print of the window and paste it on a page in Microsoft Word. Make a PRINTOUT of the screen print with your EXAMINATION NUMBER left and QUESTIONS right in the header.



[5]

TOTAL SECTION A: 80

SECTION B: PRACTICAL

QUESTION 4

- 4.1 Create the spreadsheet below in Excel using Courier New 11 pt. Use the exact cell references as indicated.
 - 4.1.1 Do NOT show row and column headings as they were only shown so that you can see cell addresses to be used.
 - 4.1.2 Insert a blank row between rows 1 and 2 and rows 2 and 3. (2)
 - 4.1.3 Bold and center (horizontally and vertically) the column headings in row 5. (2)
 - 4.1.4 Use the wrap text function for the column headings in row 5. (1)
 - 4.1.5 Insert horizontal and vertical lines using the method with which you are familiar. (2)
 - 4.1.6 Save the document as QUESTION 4.1.
 - 4.1.7 Insert your EXAMINATION NUMBER and QUESTION 4.1 on the right-hand side as a header. (2)
 - 4.1.8 Print the document on A4 landscape without row and column headings and gridlines. (1)

	A	B	C	D	E	F	G	H	I	J
1	ONDINI FARM									
2										
3	WORKERS WAGES FOR 1st WEEK OF JANUARY 2016									
4										
5	WORKER'S NAMES	AGE (YEARS)	DAYS WORKED	WAGE RATE PER HOUR	OVER TIME (HOURS)	WEEKLY WAGE	BONUS	INCENTIVE	INCOME TAX DEDUCTIONS	GROSS WAGE
6	ALICE	25	5	215.95	3					
7	BRIAN	30	3	365	5					
8	PETERS	29	5	215.65	2					
9	JACOB	45	2	365	3					
10	LUTHANDO	19	4	195.05	1					
11	SUSAN	22	3	320.25	2					
12										
13	INCOME TAX:	15%			TOTAL:					
14					AVERAGE:					
15										
16										
17										
18										
19										
20										
21										
22										

FIGURE 1

- 4.2 Retrieve the document saved as QUESTION 4.1 and save it as QUESTION 4.2. Make changes as indicated in FIGURE 2 and according to the following instructions:
- 4.2.1 Do the following changes on the main heading 'ONDINI FARM'
- Underline and bold
 - Change the font size to 18 pt and the font type to Baskerville Old Face.
 - Centre the main heading across the width of the spreadsheet. (4)
- 4.2.2 Change the subheading WORKERS WAGES FOR 1st WEEK OF JANUARY 2016 to bold and italics. (2)
- 4.2.3 Calculate the answers where the letters of the alphabet **A–G** appear in FIGURE 2. Make use of the correct cell reference in the formulas.
- (A) A normal working day consists of 8 working hours. WEEKLY WAGE = product of days worked, wage rate per hour and 8 hours
- (B) Use the IF-function to calculate each worker's BONUS according to the OVERTIME (HOURS) in column E. If the hours for overtime are 3 or more the worker gets a R550,00 bonus
- (C) Use the VLOOKUP function to calculate each worker's incentive according to the DAYS WORKED. Use the table shown as a reference
- (D) INCOME TAX DEDUCTION = The sum of WEEKLY WAGE, BONUS and INCENTIVE multiplied by percentage for INCOME TAX
- (E) GROSS WAGE = Total of WEEKLY WAGE, BONUS, INCENTIVE and INCOME TAX DEDUCTIONS
- (F) Total = Total for indicated columns
- (G) Average = Average for indicated columns (7 × 2) (14)
- 4.2.4 Sort the data in descending order according to the AGE (YEARS) column. (1)
- 4.2.5 Display ALL figures that represent money with an R sign and TWO decimal places. ALL other FIGURES must be displayed as integers. (3)

4.2.6 Right align and bold ALL answers calculated in A–G. (2)

4.2.7 Make a PRINTOUT of the spreadsheet in landscape with row and column headings but NO gridlines. The spreadsheet must fit on ONE page. (3)

	A	B	C	D	E	F	G	H	I	J
1	ONDINI FARM									
2										
3	WORKERS WAGES FOR 1st WEEK OF JANUARY 2016									
4										
	WORKER'S NAMES	AGE (YEARS)	DAYS WORKED	WAGE RATE PER HOUR	OVER TIME (HOURS)	WEEKLY WAGE	BONUS	INCENTIVE	INCOME TAX DEDUCTIONS	GROSS WAGE
5										
6	ALICE	25	5	215.95	3	A	B	C	D	E
7	BRIAN	30	3	365	5					
8	PETERS	29	5	215.65	2					
9	JACOB	45	2	365	3					
10	LUTHANDO	19	4	195.05	1					
11	SUSAN	22	3	320.25	2					
12										
13	INCOME TAX:	15%			TOTAL:	F				
14					AVERAGE:	G				
15										
16										
17										
18										
19										
20										
21										
22										

	INCENTIVE
0	R 0.00
1	R 150.00
2	R 200.00
3	R 250.00
4	R 350.00
5	R 500.00

FIGURE 2

4.3 Retrieve the document saved as QUESTION 4.2 and save it as QUESTION 4.3.

4.3.1 Display the formulae. (7)

4.3.2 Change the question number in the header to QUESTION 4.3 (1)

4.3.3 Hide columns B, C, D and E. (1)

4.3.4 Adjust the column widths. (1)

4.3.5 Save and print the document in landscape without row and column headings or gridlines. The document must fit on TWO A4 pages. (4)

4.4 Retrieve the document saved as QUESTION 4.3 save it as QUESTION 4.4

4.4.1 Create a combination graph comparing Gross Wage represented by a column (clustered) graph and Weekly Wage represented by line (with markers) graph. (3)

- 4.4.2 Insert the following information as heading of the graph:
- WEEKLY WAGES
EXAM NUMBER
QUESTION 4.4
- (3)
- 4.4.3 The legends must appear on the right side of the graph. (1)
- 4.4.4 Data labels must appear on ALL columns representing the gross wage. (1)
- 4.4.5 The following must be used as titles for both X-axis and Y-axis:
- Vertical axis: AMOUNT
Horizontal axis: WORKERS
- (2)
- 4.4.6 Move the graph to a new sheet. (2)
- 4.4.7 Print the graph in landscape on ONE page. (2)
- [66]**

QUESTION 5

The computer lecturer has already keyed in the document below and saved it as WORD DOCUMENT.

Marketing plan

The farmer needs to decide how he is going to market his products. This management function is known as marketing planning and is explained as the decision about marketing objectives, the ways how these objectives will be reached and a logical order of activities that enable the farmer to execute the plans.

Marketing planning is thus seen as the blueprint that the farmer needs to be successful in the market. In the marketing plan, the objectives of the farm, the method of how it is going to be reached and the estimated cost thereof are explained. In order to have an effective marketing plan the farmer will do the following:

Predict where the business should be in two to three years from now.

Always organise all marketing efforts around an identified group of consumers.

Gather as much as possible information regarding the business environment.

Keep the marketing plans and the planning process as simple as possible.

Description of the market

The market definition identifies the main market segments and the target markets for the product. This includes a consumer profile, as well as factors that influence the consumer in the buying of products.

Product overview

This is a summary of the sales, prices and profit margins of the product.

An overview of competition

The most important competitors in the market are identified.

- 5.1 Open the document WORD DOCUMENT.
- 5.2 Save as QUESTION 5.
- 5.3 Make the following changes on the document:
 - 5.3.1 Change the heading Marketing Plan to bold and underline. Use Bauhaus 93, size 16 pt. (4)
 - 5.3.2 Change the first paragraph 'The farmer needs ... execute the plan' to the following:
 - Indentation must be 5 cm/2' on both sides.
 - Line spacing must be double.
 - The paragraph must be centered (3)
 - 5.3.3 A copy of the second paragraph must be the last paragraph of the document (1)
 - 5.3.4 The sentence 'In order to have ... do the following' must be bold, italics and right aligned. (3)
 - 5.3.5 ALL sentences from 'Predict where ...' up to 'Keep the marketing plans ...' must be in bullet form. (1)
 - 5.3.6 Number the paragraphs as indicated below. The number and the full stop must appear in the left hand margin. (2)

1. Description of the market

The market definition identifies the main market segments and the target markets for the product. This includes a consumer profile, as well as factors that influence the consumer in the buying of products.

2. **Product overview**

This is a summary of the sales, prices and profit margins of the product.

3. **An overview of competition**

The most important competitors in the market are identified.

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

Factors in the broad business		
ECONOMY	LEGISLATION	SOCIO-CULTURAL
Inflation	Labour relations	Demographic changes
Interest rates	Food safety regulations	Changes in life style
Tax rates	Standards	Level of education
VAT rates	Packaging regulations	Urbanisation

(5)

5.3.8 Insert a flower clipart of your choice on the top right corner of the first page bellow the header. The height of the clip art must be 4 cm. Use the picture effects: Shadow offset left.

(4)

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

(1)

5.4 Key in your EXAMINATION NUMBER left and QUESTION 2 right in the footer.

(1)

5.5 Save the document and make a PRINTOUT.

[25]

QUESTION 6

Prepare a wage database. Create the database using the file name EMPLOYMENT.

6.1 Create the following fields:

FIELD	INFORMATION
NO.	Auto number
NAME	20 characters
DATE OF BIRTH	The date must be in the format DD/MM/YYYY
DEPARTMENT	10 characters
PROPOSED WAGE	Will not exceed R2 995.99
MARRIED	YES/NO
EXAM NO.	Long integer
QUESTION 6	10 characters

6.2 Key in the records on the next page and save the table as WAGES.
Make a PRINTOUT of the table on A4 landscape.

(10)

NO	NAME	DATE OF BIRTH	DEPARTMENT	PROPOSED WAGE	MARRIED	EXAM NUMBER	QUESTION 3
1	JOSH	1982/07/21	IRRIGATION	R1500.00	True	YOUR EXAM NO.	
2	JABU	1990/03/12	ANIMAL	R1850.00	False	YOUR EXAM NO.	
3	TRISH	1985/09/01	FINANCE	R2995.00	False	YOUR EXAM NO.	
4	WILL	1978/06/22	PLANT	R1625.00	True	YOUR EXAM NO.	
5	BASIL	1988/07/10	IRRIGATION	R1600.00	True	YOUR EXAM NO.	
6	PETER	1994/01/12	FINANCE	R2050.00	False	YOUR EXAM NO.	
7	BRUCE	1991/11/29	ANIMAL	R1700.00	True	YOUR EXAM NO.	

- 6.3 Make a PRINTOUT of the structure of the table as shown 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 6 QUERY.
Print the query in landscape. (3)
- 6.5 Create a report using the following headings:

NAME	DATE OF BIRTH	DEPARTMENT	PROPOSED WAGE
------	---------------	------------	---------------

- 6.5.1 The names of ALL workers must appear in the report except for those working in the finance department. (1)
- 6.5.2 Sort the data in alphabetical order according to the name column. (2)
- 6.5.3 The title of the report must be EXAM NO. QUEST 6 REPORT (2)
- 6.5.4 The calculated total proposed wage must appear underneath the last PROPOSED WAGE and the word TOTAL must appear underneath the last NAME. (4)
- 6.5.5 Make a PRINTOUT of the report on an A4 portrait page. (1)

[29]

TOTAL SECTION B: 120
GRAND TOTAL: 200