higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

GENERAL STUDIES

N970**(E)**(J3)H
JUNE EXAMINATION

NATIONAL CERTIFICATE

MAINTENANCE MANAGEMENT: FARMING N4

(4090524)

3 June 2016 (Y-Paper)
13:00–16:00

Nonprogrammable calculators may be used.

This question paper consists of 8 pages.

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DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE
MAINTENANCE MANAGEMENT: FARMING N4
TIME: 3 HOURS
MARKS: 100

INSTRUCTIONS AND INFORMATION

1. Answer ALL the questions.
2. Read ALL the questions carefully.
3. Number the answers according to the numbering system used in this question paper.
4. Sketches and diagrams should be labelled and neatly done in pencil.
5. Write neatly and legibly.

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QUESTION 1

1.1 Consider the factors in the planning of a proper workspace or maintenance building for the general maintenance of vehicles and farming equipment.

Draw a simple ground plan of a suitable workplace.

Label FIVE important considerations on your ground plan that shows the effective planning of your workspace in the building. (5 x 2) (10)

1.2 Name any TEN different types of basic tools and equipment which will be needed in the maintenance building drawn in QUESTION 1.1. (10)
[20]

QUESTION 2

2.1 Explain the function of the following engine parts.

2.1.1 Flywheel

2.1.2 Piston rings

2.1.3 Piston

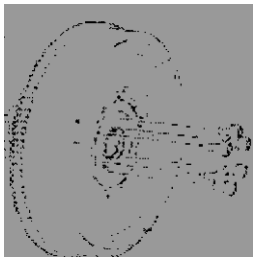
2.1.4 Connecting rod

2.1.5 Cylinder block

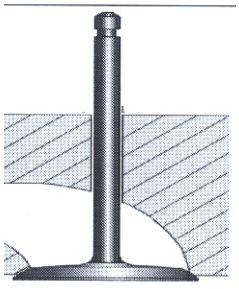
(5 x 2) (10)

2.2 Name the following engine components.

2.2.1



2.2.2



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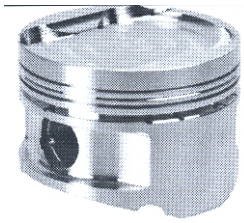
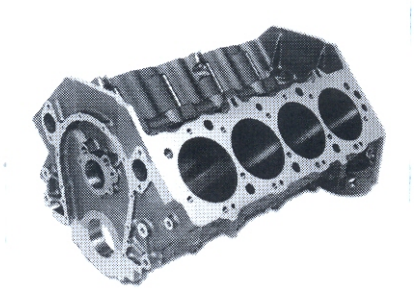
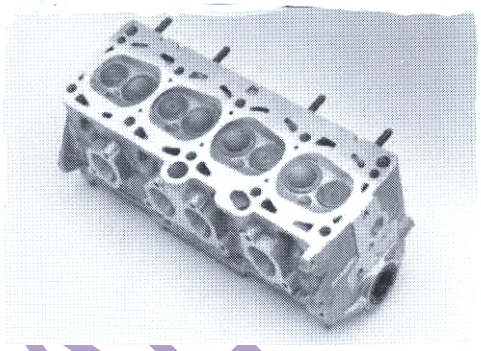
2.2.3



2.2.4



2.2.5



(5 x 1) (5)
[15]

QUESTION 3

3.1 Discuss the responsibilities of the employer towards the worker. (2)

3.2 Discuss the responsibilities of the worker towards the employer. (2)

3.3 Name the act which governs the safety of workers in the workplace. (1)

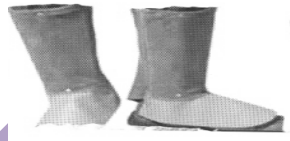
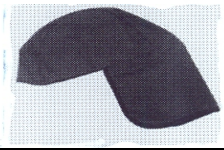
3.4 State FIVE safety precautions to prevent home fires. (5)

3.5 Explain how you will use recycling as a means of pollution control on your farm. (5)
[15]

GENERAL RULES

QUESTION 4

4.1 Choose a picture from COLUMN B that matches a term in COLUMN A. Write only the letter (A–J) next to the question number (4.1.1–4.1.10) in the ANSWER BOOK.

COLUMN A		COLUMN B	
4.1.1	Skullcap	A	
4.1.2	Apron	B	
4.1.3	Respirator	C	
4.1.4	Auto darkening	D	
4.1.5	Spats	E	
4.1.6	Gloves	F	
4.1.7	Earmuffs	G	
4.1.8	Overall	H	
4.1.9	Gas welding glasses	I	
4.1.10	Welding sleeves	J	

(10 x 1) (10)

GENERAL GUIDES

4.2 Make a neat labelled drawing of a 3G welding joint showing the plate position, welding electrode angle, welding direction, welding beads and electrode. (5)
[15]

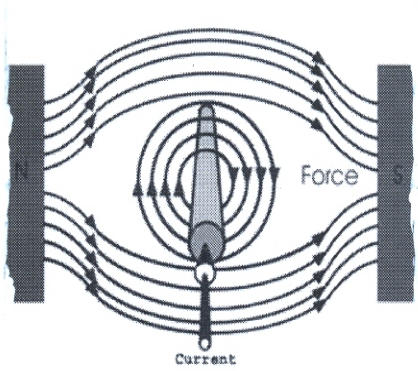
QUESTION 5

5.1 Calculate the power consumption in kW of a 250-volt kettle when it draws a current of 4 ampere. (3)

5.2 Give TWO examples of conductor material. (2)

5.3 The following diagram shows the principle of a motor.

Indicate whether the conductor will move up or down and explain your answer.



(4)

5.4 Name TWO types of electrical measuring instrument displays. (2)

5.5 Explain FOUR general precautions when using electrical measuring equipment. (4)
[15]

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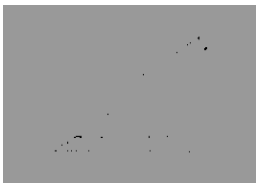
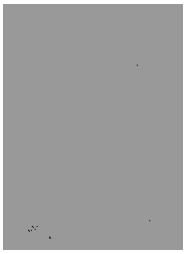
QUESTION 6

6.1 Name the different components of building setting-out equipment. Write the answer next to the question number (6.1.1–6.1.7) in the ANSWER BOOK.

6.1.1 

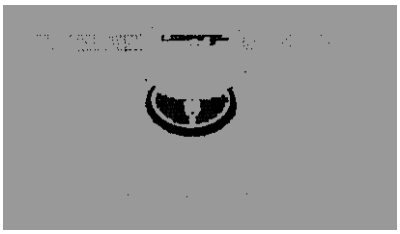
6.1.2 

6.1.3 

6.1.4 

6.1.5 

6.1.6 

6.1.7 

(7 x 1) (7)

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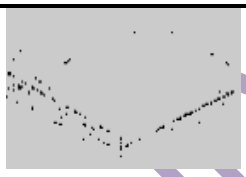
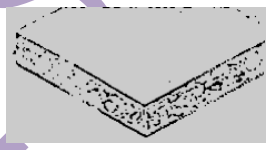
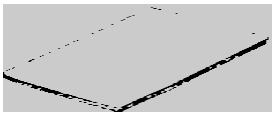
6.2 Make a neat labelled drawing of a wall.

The wall should have two stretcher courses and one header course in the middle. (3)

6.3 What are the ingredients of a mixture of concrete to lay foundations with? (4)

6.4 Choose a picture from COLUMN B that matches a word(s) in COLUMN A. Write only the letter (A–D) next to the question number (6.4.1–6.4.4) in the ANSWER BOOK.

COLUMN A		COLUMN B
6.4.1	Hardboard	
6.4.2	Laminated wood	A 
6.4.3	Plywood	
6.4.4	Chipboard	B 
		C 
		D 

(4 x 1) (4)

6.5 Make a neat labelled drawing of a wall.

The wall should have two stretcher courses with a rack back end. (2)

[20]

TOTAL: 100

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