higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE

MOTOR BODYWORK THEORY N1

(11040561)

22 November 2022 (X-paper)
09:00–12:00

This question paper consists of 8 pages.

144Q1E2222

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DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE
MOTOR BODYWORK THEORY N1
TIME: 3 HOURS
MARKS: 150

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. Use only a blue or black pen.
5. Start each question on a new page.
6. Write neatly and legibly.

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SECTION A

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 part in a cooling system stores and cools water?

A Fan
B Radiator
C Engine
D Pump

1.2 It securely holds a vehicle door so that passengers are safe at all times.

A Handle
B Door rubber
C Mate
D Door lock

1.3 Drain the water in the system every day to prolong its life span. It will also deliver quality air.

A Supply more air
B Adjust to correct spray pattern
C Compressor
D Water the panel

1.4 Although it is not combustible, it supports combustion.

A Gas
B Nitrogen
C Oxygen
D Petrol

1.5 Explain the way that a panel beater must move a spray gun:

A From left to right
B From top to bottom
C Zigzag
D Any movement of your choice

1.6 The term *fusion welding* means:

A The process in which metals are warm to normal temperature.
B A and B.
C The process in which heat is absorbed.
D The process in which metals are melted or fused together

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1.7 Backfiring can occur when gas welding is done. It is caused when …

A the welding piece is too close to the nozzle
B the nozzle is incorrect
C the pressure is incorrect
D all of the above

1.8 The bottom of a door panel got rusty. What can be done to fix it?

A Cut and replace the affected area.
B Apply body filler to the area.
C Apply silicone to the area.
D No relevant answer.

1.9 A bent door should be repaired by …

A placing it on a wooden block
B cleaning it with water and soap
C standing on it
D changing the lock

1.10 After a radiator has been patched, a radiator test should be also done to see ...

A if there is no smoke
B how much water is needed in the tank
C if it still leaks
D none of the above

(10 × 1) **[10]**

QUESTION 2

Indicate whether the following statements are TRUE or FALSE by writing 'True' or 'False' next to the question number (2.1–2.5) in the ANSWER BOOK. Give ONE reason for each answer.

2.1 Always wear personal protective equipment when you work in the work shop.

2.2 Electrical and pneumatic grinders are used for body work.

2.3 A workshop should be clean and organised so that it complies with safety regulations.

2.4 A suction fan is not important when spray painting is performed.

2.5 If a spray gun is held too far from a surface, the paint will run.

(5 × 1) **[5]**

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QUESTION 3

Choose a term from COLUMN B that matches a description in COLUMN A. Write only the letter (A–J) next to the question number (3.1–3.10) in the ANSWER BOOK.

COLUMN A		COLUMN B	
3.1	It is used to heat up the soldering lead when soldering a panel	A	trestle/jack stand
3.2	It acts as a solvent for paint	B	pneumatic tools
3.3	It is used to straighten a chassis	C	flux
3.4	For alignment of head lights	D	dent
3.5	To extinguish fires	E	high electrical voltage
3.6	A jacked-up vehicle is supported by it	F	chassis straightener
3.7	It removes impurities during brazing	G	headlight aimer
3.8	Alternating current (AC)	H	thinners
3.9	Damage on a body panel	I	fire extinguisher
3.10	Tools that are air operated	J	soldering iron

(10 × 1) **[10]**

QUESTION 4

Complete the following sentences by writing only the missing word or words next to the question number (4.1–4.5) in the ANSWER BOOK

4.1 A leaking fuel … must be cleaned and the hole must be sealed.

4.2 Always wear a … helmet when you perform a welding task.

4.3 Use a … block to support or hold sand paper.

4.4 … or oil spilled on the floor should be immediately removed to avoid injuries.

4.5 Gas cylinders are placed in an … position in a trolley and secured with a chain.

(5 × 1) **[5]**

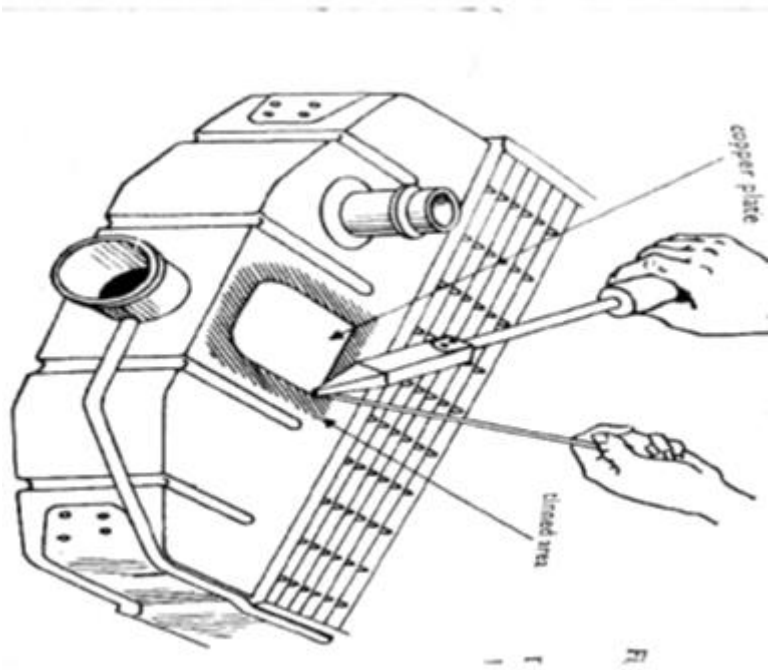
TOTAL SECTION A: 30

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SECTION B

QUESTION 5

Study the picture below and answer the questions.

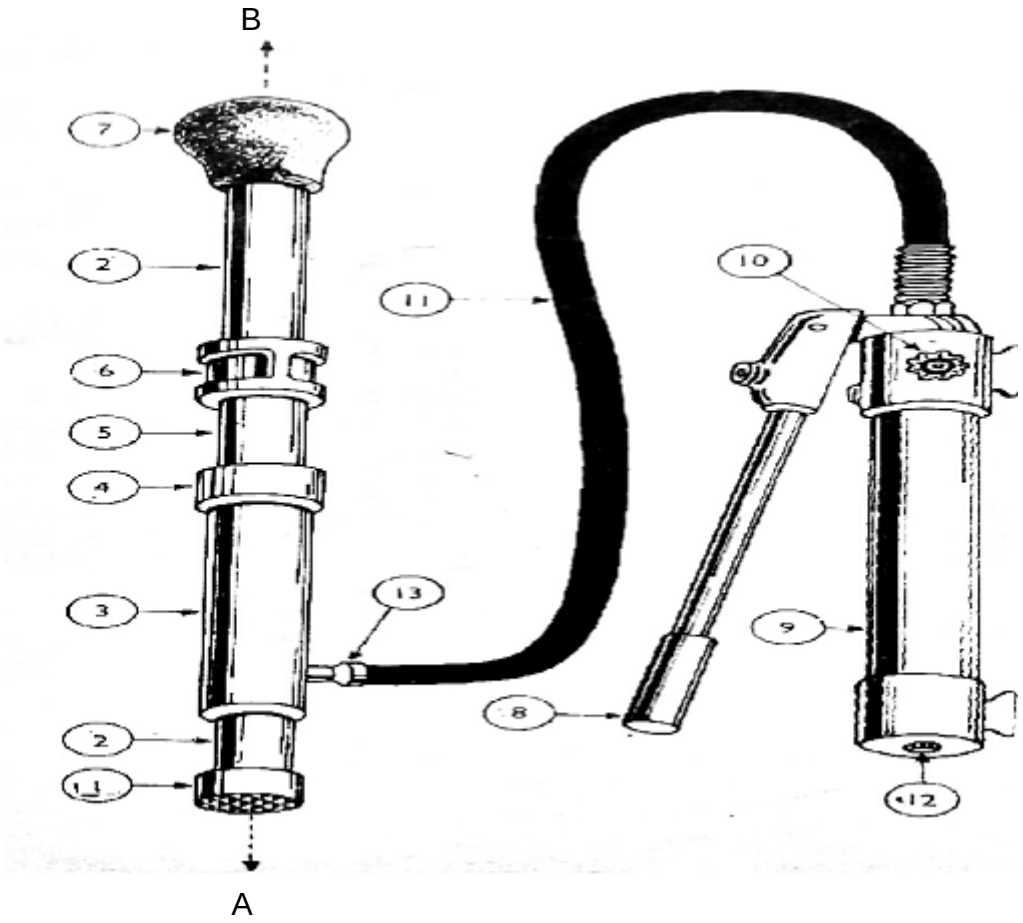


5.1	Identify the component in the picture above.	(2)
5.2	What type of materials and tool are used to perform the task?	(3)
5.3	Name THREE types of flames in gas welding.	(3)
5.4	Explain the problem that necessitated the task.	(3)
5.5	Describe the FOUR steps to repair the component.	(4)

[15]

QUESTION 6

Study the picture below and answer the questions.



6.1 What type of a fluid is used in a porta power? (2)

6.2 Label the parts (1–12) of this piece of equipment. (12)

6.3 Explain the operation of this piece of equipment. (8)

6.4 Its operational action is either pulling or pushing as indicated by the arrows A and B. What actions are indicated by the arrows? (3)

[25]

QUESTION 7

Read the scenario below and then answer the questions that follow.

The Toyota corolla sedan right-hand door has rust at the bottom.

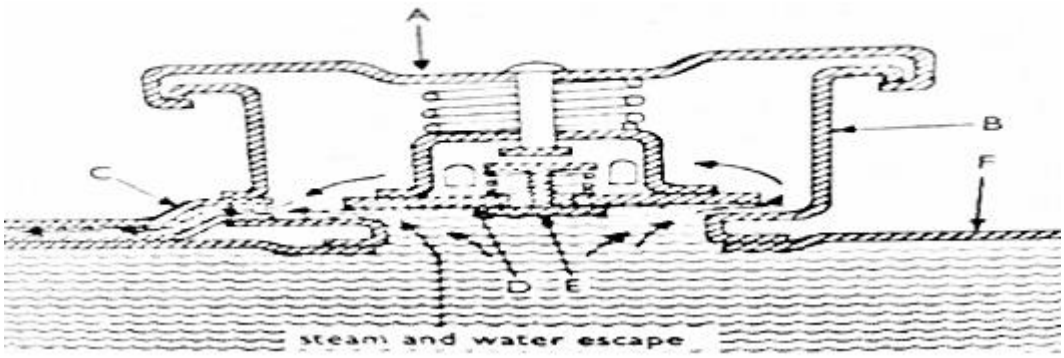
Describe how will you start to repair it with a sheet metal patch. **[20]**

TOTAL SECTION B: 60

SECTION C

QUESTION 8

Study the picture below and answer the questions.



8.1	Name the parts labelled A, B and C.		(3)
8.2	Name TWO functions of a radiator cap.	(2 × 2)	(4)
			[7]

QUESTION 9

9.1	State TWO advantages and disadvantages of a tubular radiator core.	(4 × 2)	(8)
9.2	Briefly differentiate between *rightward* and *leftward welding.*	(3 × 2)	(6)
9.3	What tools and resources are required for shrinking?		(4)
9.4	List FIVE tools generally used in a motor body workshop.		(5)
9.5	Name TWO types of joints.		(2)
			[25]

TOTAL SECTION C: 45
GRAND TOTAL: 150

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