FEDS FAIRVIEW EDUCATIONAL SERVICES LTD

NZQA accredited and registered provider

Welding

PRACTICE PAPER ONLY

Test Paper One / Time allowed 90 mins

To be completed by the student

Student Name _____ **Date** __ / __ /2021

School/Provider _____

To be completed by the School Invigilator/Coordinator/Tutor

I confirm that this assessment was completed by the student named above as a closed book exercise under exam conditions

Invigilator Name_____

Invigilator Sign_____

Assessed By _____ **Date** __ /__ / 2021

Assessor's Stamp

Assessors Note: Materials relate to unit standard 30570

ASSESSMENT INSTRUCTIONS

- Before starting this assessment you should have achieved a mark of at least 80% for your workbook.
- Use a black or blue ball point pen. (do not use pencil)
- Write your full name on the cover page.
- This is a closed book assessment, so you cannot bring any reference material in, or seek help from anyone else.
- You need to answer all the questions.
- Read the questions carefully, and give detailed answers when asked to.
- You must complete the assessment under exam conditions.
- To achieve the unit standard you must show competency for each outcome.

Complete the following by circling Yes or No as appropriate:

Are you ready to be assessed? **Yes** **No**

Have the assessment instructions these been explained to you? **Yes** **No**

Do you understand the assessment instructions? **Yes** **No**

Have you all the materials/resources that you need for this assessment? **Yes** **No**

Please sign to acknowledge that you have read these instructions and are ready to be assessed.

Student Signature: _____ **Date:** _____

You must complete the assessment instructions on Page 2 before starting this assessment!

General Welding

1. A late model vehicle with EFI (electronic fuel injection) is to have the exhaust repaired using the MIG welding plant. What action should be taken before welding commences? Please circle A, B or C:

A. Remove all electronics from the vehicle before welding.

B. Disconnect the battery after the welding task is complete.

C. Either disconnect the battery or fit an anti-spike device before welding starts.

2. How can each of the following welding faults be identified:

Lack of fusion

_____

_____

Excessive spatter

_____

_____

Lack of penetration

_____

_____

3. Explain why it is important to remove paint, oil, dirt and grease from metals before commencing welding.

_____

_____

_____

4. Identify and describe each of the following welding joint pictures.

_____

_____

_____

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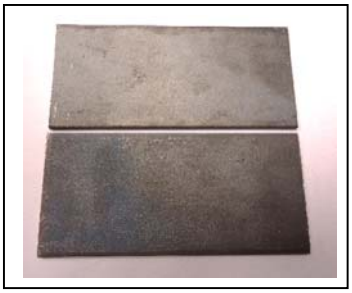
_____



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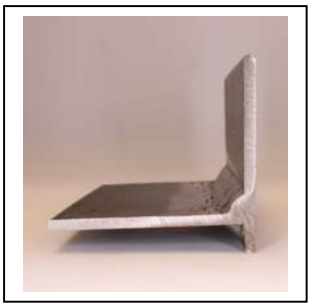

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Oxy-acetylene welding

5. Briefly explain the purpose of each of the following oxy-acetylene welding applications:

Brazing: _____

_____

_____

Soldering: _____

_____

_____

6. Identify each of the following oxy-acetylene welding plant components and outline their main function.

A

B

C

A: Component: _____

Function: _____

_____

B: Component: _____

Function: _____

_____

C: Component: _____

Function: _____

_____

7. Match up each welding term with the most appropriate description:

A – Acetylene = 6 – has a garlic like odour

A	Acetylene	**A6**	1	Process used to prepare material for shaping or to release seized components
B	Oxygen pressure regulator		2	The most commonly used welding pressure setting
C	Carburising flame		3	Removes foreign material from the cylinder valve
D	Brazing		4	Process used to cut through metals
E	Neutral flame		5	Holds components together until they can be fully welded
F	Cracking		**6**	Has a garlic-like odour
G	Flashback		7	Process used to cool heated steel
H	Welding tip		8	Is colour coded black and has a right hand thread
I	Tack weld		9	Selected according to number and size of hole
J	Soldering		10	Used to join base metals together which have low melting points
K	Thermal heating		11	Welding technique used where metals have a low melting point
L	Thermal cutting		12	Occurs when burning occurs inside the hose
M	Quenching		13	Has more acetylene gas than oxygen gas

8. Outline the procedure involved in setting up the welding plant for fusion welding.

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9. Describe the procedure involved when shutting down an oxy-acetylene welding plant after use.

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MIG welding

10. Which <u>ONE</u> of the following statements is true? Please circle A, B or C.

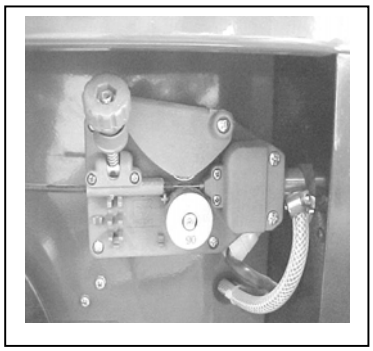
A A gas mixture of 80% argon and 20% CO2 is generally used for welding mild steel.

B A gas bottle is always used when using a flux cored wire.

C Only the gas mixture needs to be changed when welding aluminium from mild steel.

11. Identify each of the following components and outline their main function.

A



B

C

A: Component: _____

Function: _____

_____

B: Component: _____

Function: _____

_____

C: Component: _____

Function: _____

_____

12. What is the main type of shielding gas used for MIG welding thin metal applications such as mild steel, aluminium and high strength steel?

_____

13. Name three types of shielding gas that are available for MIG welding.

1 _____

2 _____

3 _____

14. Name two types of welding joint that can be used when MIG welding on a vehicle.

1 _____

2 _____

15. Explain how reducing the current output of the MIG welder affects the Duty Cycle of the welding machine.

_____

_____

_____

_____

16. What type of welding wire is used when welding panel steel?

_____

17. Explain the procedure involved in setting up a MIG welding plant.

_____

_____

_____

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_____

18. Explain the procedure involved in shutting down a MIG welding plant.

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19. Explain why it is important to maintain the correct welding speed when mig welding.

_____

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_____

_____

20. Explain why it is important to ensure that the weld direction is pushing forward when mig welding.

_____

_____

_____

_____

_____

21. Explain why it is important to have the correct stick out length when mig welding.

_____

_____

_____

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_____

TIG welding

22. Describe the procedure involved in setting up a GTAW (TIG) welding plant.

_____

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23. What is the purpose of shielding gas?

_____

_____

_____

24. Explain why it is important to adjust the amperage setting before welding.

_____

_____

_____

25. Describe the procedure involved in when carrying out TIG welding.

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