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071505T4MTP**MECHANICAL PRODUCTION TECHNICIAN LEVEL 5****ENG/OS/ME/CR/01/5****Fabricate sheet metal parts****July/August 2025**

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**TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION
COUNCIL (TVET CDACC)**

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WRITTEN ASSESSMENT**Time: 3 HOURS**

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INSTRUCTIONS TO CANDIDATE

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1. This paper consists of **TWO** sections: **A and B**.
2. Attempt **ALL** questions in section A and **ANY THREE (3)** questions in section B.
3. Marks for each question are indicated in the brackets.
4. Candidates are provided with a **answer booklet**.
5. Do not write on the question paper.

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This paper consists of FOUR printed pages

**Candidates should check the question paper to ascertain that all pages are printed as
Indicated and that no questions are missing.**

SECTION A (40 MARKS)***Attempt ALL the questions in this section.***

1. Accidents in sheet metal work may occur due to various factors. List FOUR common causes of accidents. (4 Marks)
2. Marking out process is a very crucial step during sheet metal work. Give TWO importance of marking out. (2 Marks)
3. Mechanical fasteners are one of the joining methods in sheet metal work. Identify THREE examples of these fasteners. (3 Marks)
4. Marking out tools are essential for accurate layout and measurement in sheet metal operations. List FOUR of these tools. (4 Marks)
5. Punch and die is a machine tool used in various sheet metal operations. Identify any TWO operations performed by this machine tool. (2 Marks)
6. Operation plan is essential when fabricating sheet metal parts. Identify FOUR important details you must capture in this plan. (4 Marks)
7. Safety is performing gas welding. List FOUR safety precautions to be observed. (4 Marks)
8. In a sheet metal workshop, it is important to manage waste materials. Identify THREE ways. (3 Marks)
9. Machine servicing is one of paramount routine activities done in order to have a functional workshop. List FOUR activities carried out during this activity. (4 Marks)
10. Sheet different types of metals. Give TWO of these metals. (2 Marks)
11. Pickling is a process carried out before, during and after any operation in sheet metal workshop. List FOUR activities carried out during this process. (4 Marks)
12. Holding devices are used to secure work pieces during sheet metal operations. List FOUR of these devices. (4 Marks)

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SECTION B: (60 MARKS)*(Attempt only **THREE** questions from this section)*

13.

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- a. You visited a fabricating company during your academic field trip and you met technicians doing some bending operations. With the aid of a diagram, explain the following ns:

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i. Hemming

ii. Seaming

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iii. Edge Bending

iv. Curling

(12 marks)

- b. There is a wide range of application for sheet metals. Describe FOUR areas where they are used. (4 marks)

- c. When to be used in sheet metal work, properties of materials is taken into consideration. Explain these TWO properties (4 marks)

i. Malleability

ii. Ductility

14.

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- a. Pattern development in sheet metalwork involves creating patterns to form desired structures. Discuss THREE types of pattern layouts (6 marks)

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- b. Temporary and permanent joints are distinguished because of their purpose and intended use of the assembled parts in sheet metal work and fabrications. Discuss FOUR advantages of temporary joints over permanent joint (8 marks)

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- c. Permanent joints in sheet metals play a big role as opposed to temporary joints. Explain THREE types of these joints as used in sheet metal parts. (6 marks)

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- a. Finishing processes is one of the final procedures that enhance quality of the metal parts. Discuss TWO examples of these processes on finished sheet metal surfaces. (4 marks)
- b. After your college studies, you got a job at Ndege Sukari fabricators. You are deployed on the surface finishing line as the main supervisor. Discuss FOUR factors

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that you will be considering when choosing the most appropriate finishing process for sheet metal works at this company. (8 marks)

- c. Machine safety and depends on how they are being handled and operated.

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Explain FOUR ways one can demonstrate correct handling of tools and equipment in the workshop. (8 Marks)

16.

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- a. When performing sheet metal operations in the workshop, safety rules and regulations must be adhered to. Explain FOUR of this rules. (8 marks)

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- b. As a supervisor at Ndege Sukari company, explain to your newly employed workers with aid of a diagram the following cutting operations in sheet metal. (12 marks)

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- i. Slotting
- ii. Perforation
- iii. Notching
- iv. Blanking

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