

071606T4IMT

INDUSTRIAL MECHATRONICS TECHNOLOGY LEVEL 6

ENG/OS/IMT/CR/13/6

Operate Fabrication Machinery

March/April 2026



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

WRITTEN ASSESSMENT

TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATE

1. This paper consists of **TWO** sections: **A** and **B**.
2. Answer **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 separate answer booklet
5. Do not write on this question paper.

This paper consists of THREE (3) 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)

Answer ALL questions in this section.

1. Fabrication process planning is essential before production begins. State FOUR reasons why a fabrication process plan should be prepared before starting fabrication work. (4 Marks)
2. Engineering drawings guide fabrication activities. Identify FOUR types of information obtained from fabrication drawings used during machine setup and operation (4 Marks)
3. Workplace safety must be observed during fabrication operations. State FOUR personal protective equipment (PPE) used when operating fabrication machines. (4 Marks)
4. Machine isolation is critical during servicing or tool change. List FOUR steps followed when carrying out a lockout/tag-out procedure on fabrication equipment. (4 Marks)
5. Tooling setup affects fabrication accuracy. State FOUR factors to consider when selecting and setting tools for a fabrication process. (4 Marks)
6. Machine setup must match the fabrication task. List FOUR machine parameters that must be set correctly before operating a fabrication machine. (4 Marks)
7. Following the correct fabrication sequence improves productivity. State FOUR advantages of adhering to the recommended fabrication operation sequence (4 Marks)
8. Inspection is carried out throughout the fabrication process. Identify FOUR checks performed when inspecting fabricated components during production (4 Marks)
9. Monitoring fabrication performance helps maintain quality. State FOUR indicators used to monitor fabrication process performance. (4 Marks)
10. Quality control ensures that a system/process output meets character requirements and drawing specifications. List FOUR activities involved in performing production quality control and product inspection (4 Marks)

SECTION B (60 MARKS)

Answer THREE questions in this section

11.

- a. Fabrication machines perform various metal forming and machining operations. Describe FIVE fabrication processes commonly used in industrial workshops.

(10 Marks)

- b. Occupational safety standards govern fabrication workshops. Explain FIVE workshop safety rules that must be observed when operating fabrication machinery (10 Marks)

12.

- a. An operation sequence plan ensures efficient fabrication. Explain FIVE benefits of developing and following an operation sequence plan during fabrication. (10 Marks)

- b. Part design influences fabrication processes. Describe FIVE ways in which part design affects the choice of fabrication processes and machine setup. (10 Marks)

13.

- a. Machine lockdown procedures involve authorized personnel. Describe FIVE activities carried out during machine lockdown for fabrication equipment. (10 Marks)

- b. Inspection of fabricated products ensures compliance with standards. Explain FIVE benefits of inspecting fabricated products in accordance with Environmental, Health, and Safety (EHS) standards (10 Marks)

14.

- a. Process documentation is essential in fabrication operations. Describe FIVE reasons why fabrication processes should be properly documented. (10 Marks)

- b. Documentation is vital for tracking fabrication progress and ensuring quality control in engineering production. Outline FIVE record-keeping techniques used during the fabrication process (10 Marks)