

MODULE II

ELECTRICAL INSTALLATION TECHNOLOGY LEVEL 4

ELECTRICAL ENGINEERING LEVEL 5, LEVEL 6

ENG/OS/EI/CR/03/4/MA

WIND ELECTRICAL MACHINE

January-March 2026



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

PRACTICAL ASSESSMENT

INSTRUCTIONS TO THE CANDIDATE:

1. This unit of competence shall be assessed in three phases.
2. Each assessment session has the duration included in brackets
3. The third phase of the assessment shall include a practical session and an oral assessment session.
4. The assessor will take photos and videos as you perform the tasks at critical points during the assessment.
5. Ensure all required resources for the assessment have been provided before beginning the assessment.

PRACTICAL ASSESSMENT 1 (3 HOURS)

Elements Covered

1. Disassemble rotating electrical machine

Tasks

- i. Record the following data from the motor nameplate before disassembling it:
 - Model
 - Serial number
 - Type of the motor
 - Frequency
 - Voltage
- ii. Disassemble the motor provided as shown in Figure 1, Identify the following motor parts and label;
 - End caps
 - Fan blades
 - Rotor
 - Stator
 - Bearings
- iii. Record the following winding data from the disassembled the motor:
 - Number of pits/slots
 - Number of turns per coil
 - Conductor size
 - Group of the motor
 - Bearing data

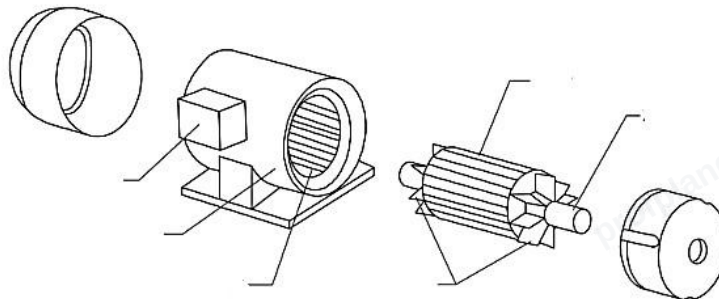


Figure 1

PRACTICAL ASSESSMENT 2 (3 HOURS)

Elements Covered

1. Install machine winding

TASKS

- i. Clean all rotating machine parts disassembled
- ii. Set the insulating tape in the motor pits/ stator slots
- iii. Prepare the coils depending on the count per group
- iv. Lay the new coils into the stator slots as shown in Figure 2.
- v. Cure the stator windings.

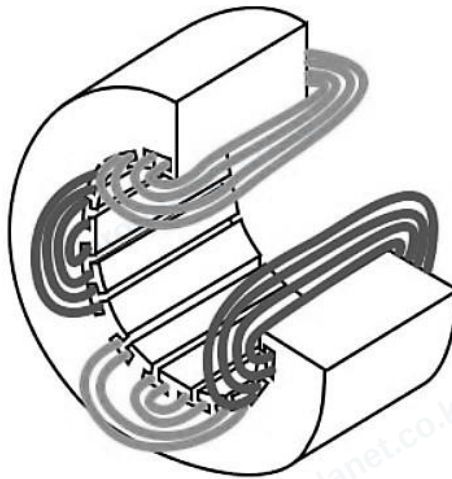


Figure 2

PRACTICAL ASSESSMENT 3 (3 HOURS) AND ORAL ASSESSMENT (1 HOUR)

Elements Covered

1. Assemble rotating electrical machine
2. Perform electrical machine testing

TASKS

- i. Reassemble the electrical motor provided as shown in Figure 3
- ii. Perform the following electrical tests on the reassembled machine:
 - Continuity Test
 - Polarity Test
 - Insulation Resistance (IR) Test
 - Voltage/Current Balance Test
- iii. Carry out housekeeping.

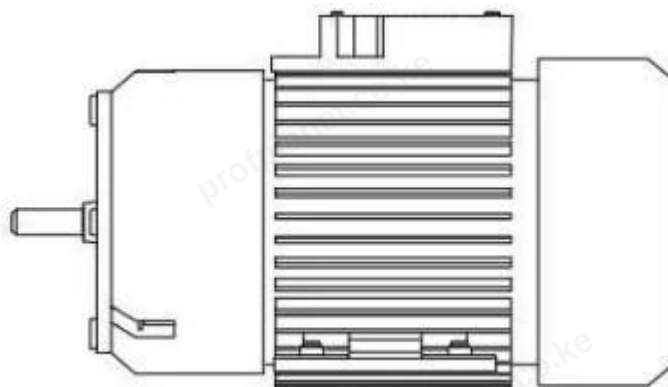


Figure 3

The assessor will proceed to ask you oral questions for 1 hour.