071306T4EEN

Electrical Engineering (Power Option) Level 6
ENG/OS/PO/CR/10/6

Demonstrate Understanding of Power Generation

July/August 2023

Time: 3hours

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

INSTRUCTIONS TO CANDIDATE

Do not write on the question paper

DO NOT switch ON power without assessor's permission

A separate plain paper will be provided

Return the question paper to the assessor at the end of practical.

This paper consists of two (2) printed pages.

Candidate should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

You are provided with the following resources to perform given tasks:

(i) Stepper motor
(ii) 30A Double pole circuit breaker
(iii) Power supply
(iv) 12V Dynamo
(v) Microcontroller (Arduino)
(vi) Conveyor bell/ rubber bladder
(vii) Multi meter
(viii) Tachometer
(ix) Lamp holder
(x) 12V DC bulb
(xi) 1.5mm^2 cable
(xii) Appropriate tools

Task to be carried out

1. Connect the stepper motor shaft such that it will firmly rotate the dynamo
2. Connect the output of the dynamo to the lamp holder and connect the stepper motor to the supply via protecting device
3. Complete the information on the table below

S/N	Speed level	Speed in rpm	Voltage generated
1.	Initial speed		
2.	Reduced speed		
3.	Increased speed		

What is your observation on the three set of speed?

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