



MACHAKOS UNIVERSITY

University Examinations for 2021/2022

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF MECHANICAL ENGINEERING

FIRST YEAR FIRST TERM EXAMINATIONS FOR TIVET

CERTIFICATE IN ELECTRICAL AND ELECTRONICS ENGINEERING.

INSTALLATION TECHNOLOGY

DATE:

TIME:

INSTRUCTIONS

Attempt all the questions

1.
 - (a) Draw a labelled line diagram of a consumers intake point (10 marks)
 - (b) Distinguish between a joint and a termination (4 marks)
 - (c) State and explain two types of electrical conductors in use today (6 marks)
2.
 - (a) State TWO merits and Two demerits of hydroelectric power plant (10 marks)
 - (b) Distinguish between renewable and no renewable energy system citing two examples of each (4 marks)
 - (c) State and Explain any THREE factors to consider when choosing a site for hydroelectric power plant (6 marks)
3.
 - (a) Draw a labelled diagram from generation to distribution in Kenya and indicate the voltage in level at each stage (10 marks)
 - (b) indicate the correct cable sizes and the rating of current in the following table (10 marks)

application	Cable sizes	Current rating
lighting		
Socket outlets		
Cooker unit		
Water heater		

- 4 (a) State and explain any FOUR advantages and three disadvantages of steam power station. (7 marks)
- (b) With the aid of a labelled diagram briefly explain the operation of steam power plant (13 marks)
- 5 (a) Define the following terms
- Conductor
 - Cable
 - Insulator
- 9marks
- (b) Briefly describe any two types of insulators used in electrical equipment (5 marks)
- (c) With the aid of a labelled diagram explain the construction features of an underground cable. (6 marks)