THE KENYA POLYTECHNIC UNIVERSITY COLLEGE

SCHOOL OF ENGINEERING SCIENCE AND TECHNOLOGY

DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING

TRADE PROJECT

PROJECT TITLE: STEPPER MOTOR CONTROL FOR A ROBOT

PRESENTED TO: THE KENYA NATIONAL EXAMINATION COUNCIL (KNEC) FOR THE AWARD OF HIGHER DIPLOMA IN ELECTRICAL ENGINEERING (POWER AND ELECTRONIC OPTION)

PRESENTED BY: OUMA JULIUS MBATA

INDEX NUMBER: 401001082

SUPERVISOR: MR. KITALA

EXAMS SERIES: OCTOBER/NOVEMBER 2009

COUES CODE: 2083

PAPER NUMBER: 2083/207

PREFACE

The d.c motors have been used widely for drive systems. They can provide clockwise and anti-clockwise motions. However, due to high inertia possessed by the d.c motors while running their accuracy during stopping and control is not good enough.

In order to avoid this problem with d.c motors, stepper motors have been widely used since they provide excellent braking and control characteristics. The fact that stepper motors are able to rotate at a step makes the stepper motor to be controlled without inertia. The regulation is possible through a program. Following this advantages I have therefore decided to work out this project of stepper motor control for a robot. It contains the driver and the microcontroller which will be used perfectly for the control of an autonomous robot.