



# TECHNICAL UNIVERSITY OF MOMBASA

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FACULTY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF MECHANICAL & AUTOMOTIVE ENGINEERING

**UNIVERSITY EXAMINATION FOR:**

**DIPLOMA IN MECHANICAL ENGINEERING**

**EPL2304 : PLANT MAINTENANCE & WORKS DRAWING II**

**END OF SEMESTER EXAMINATION**

**SERIES: APRIL 2016**

**TIME: 2 HOURS**

**DATE:** Pick Date Apr 2016

## Instructions to Candidates

You should have the following for this examination

*-Answer Booklet, examination pass and student ID*

This paper consists of Choose No questions. Attempt Choose instruction.

**Do not write on the question paper.**

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## Question ONE

(a) Draw an isometric view of a diesel power plant to incorporate the following:-

- Water cooling including a cooling tower
- Oil lubricating with oil cooler and heat exchanger
- Fuel system with main fuel tank
- Compressed air for main engine starting

[12Marks]

(b) Draw an electrical circuit for an auto transformer motor starter.

[4Marks]

(c) Draw a circuit diagram of steam supply system to a team turbine.

[4 Marks]

## Question TWO

(a) Draw a plant layout for cement manufacturing using the dry process to include:

- All the services

- Product line
- Colour coding

[20 marks]

### **Question THREE**

(a) Draw a beer production plant layout with clear representation of all the services.

[20Marks]

### **Question FOUR**

(a) Draw a Plant layout for a tea processing factory plant to include the following:

- Services
- Product line
- Key for services
- Colour coding

[20 Marks]

### **Question FIVE**

(a) Draw a ONE-line diagram of the following water supply to a multi-storey building

- Hot water
- Cold water

[16Marks]

(b) Draw a circuit diagram of a hot-lime water treatment system

[4Marks]