



# TECHNICAL UNIVERSITY OF MOMBASA

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Faculty of Engineering and Technology

DEPARTMENT OF MECHANICAL AND AUTOMOTIVE ENGINEERING  
**UNIVERSITY EXAMINATION FOR:**

DIPLOMA IN MECHANICAL ENGINEERING (DMEN 6)  
EAU 2308 ENGINE TECHNOLOGY AND PRACTICE IV  
END OF SEMESTER EXAMINATION

**SERIES: DEC 2016** PAPER-B

**TIME: 2 HOURS**

**DATE: 2016**

**Instructions to Candidates**

You should have the following for this examination

*-Answer Booklet, examination pass and student ID*

This paper consists of FIVE questions. Attempt ANY THREE.

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

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### **Question ONE**

(a) State the stages of combustion in a compression ignition engine.

(4marks)

(b) With the aid of a diagram describe the construction and operation of an injector.

(16marks)

### **Question TWO**

(a) Illustrate the fuel supply layout for a diesel engine.

(5marks)

(b) Describe with the aid of a diagram the operation of a mechanical fuel pump.

(15marks)

### **Question THREE**

(a) State **TWO** advantages and **TWO** disadvantages of a gas turbine engine.

(4marks)

(b) Use a schematic diagram to briefly explain the working of the a straight through gas turbine combustor

(16) marks)

### **Question FOUR**

(a) Describe the method of adjusting the maximum combustion pressure in a diesel engine cylinder

(10 marks)

(b) Describe a procedure for carrying out Automatic advance pressure adjustment on a Delphi DPA fuel injection pump.

(10 marks)

### **Question FIVE**

Describe the procedure for testing the phase angle of an injection pump

(20marks)

