TECHNICAL UNIVERSITY OF MOMBASA

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-A

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.

Question ONE

(a) List **FIVE** characteristics by which diesel engines may be classified
(5marks)

(b) Briefly describe the working of the basic Wankel engine.
(15 marks)

Question TWO

(a) Describe the action that takes place in the fuel pump, piping and injection valves just prior to and during injection of the fuel.
(10 marks)

(b) Describe how the combustion commences and proceeds in the cylinder of the diesel engine
(10marks)

Question THREE

(a) State **FIVE** applications of gas turbines.
(5marks)

(b) Briefly explain the functions of each of the basic components of a gas turbine engine
(15 marks)

Question FOUR

(a) Explain **FIVE** causes of black smoke in the exhaust of a diesel engine.
(10 marks)

(b) Describe a procedure for carrying out Maximum fuel delivery setting on a Delphi DPA fuel injection pump.
(10 marks)

Question FIVE

(a) Explain how you would decide whether to return a fuel nozzle in an engine overhaul.
(5marks)

(b) Describe the removal, overhauling procedures, requirements and replacement of fuel injector valves.