



MACHAKOS UNIVERSITY

University Examinations 2017/2018

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF MECHANICAL AND MANUFACTURING ENGINEERING

FIRST YEAR FIRST SEMESTER EXAMINATION FOR DIPLOMA IN MECHANICAL
ENGINEERING

ENGINE TECHNOLOGY THEORY AND PRACTICE 1

DATE: 20/12/2017

TIME: 8.30-10.30 AM

INSTRUCTIONS

This paper consists of *FIVE* questions

Answer question *ONE* (compulsory) and any other *TWO* questions

1.
 - a) Illustrate FOUR ways in which an engine can be placed in a vehicle (10 marks)
 - b) Name and briefly explain THREE engine configurations (9 marks)
 - c) Explain FIVE safety measure one should follow while working on a vehicle engine (11 marks)
2.
 - a) Name **TEN** moving and **TEN** stationary engine components (10 marks)
 - b) Using a well labelled diagram, explain the construction of **ONE** cylinder head part and **ONE** cylinder block part (10 marks)
3. Using the VALVE TIMING DIAGRAM, explain the operation of the four stroke SI engine (20 marks)
4. Explain the procedure you will use to remove an engine from a vehicle, and replace a bend inlet valve (20 marks)
5. A vehicle (SI engine) is brought to the workshop with a smoking engine.name two possible causes for this problem. Explain the procedure you will use to eliminate ONE smoking cause. (20 marks)