



MACHAKOS UNIVERSITY

University Examinations 2017/2018

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF MECHANICAL AND MANUFACTURING ENGINEERING

THIRD YEAR SECOND SEMESTER EXAMINATION FOR DIPLOMA IN

MECHANICAL ENGINEERING

VEHICLE TECHNOLOGY AND PRACTICE II

DATE: 14/12/2017

TIME: 8:30 – 10:30 AM

INSTRUCTIONS

This paper consists of *FIVE* questions

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

- 1
 - a) Name four types of brakes used in a vehicle (4 marks)
 - b) State the functions of the braking system (2 marks)
 - c) Illustrate the hydraulic braking system (8 marks)
 - d) Using a well labelled diagram, explain the operation of the brake master cylinder (16 marks)
2. With the aid of a sketch, explain the operation of the differential unit (20 marks)
3. With the aid of a diagram, explain the construction of
 - a) Semi floating
 - b) Three quarter floating
 - c) Rear axles (20 marks)
4. A vehicle whose differential is noisy is brought to the workshop, explain the procedure you will use to remove it from the vehicle, dismantle and inspect it.(front engine rear wheel drive) (20 marks)
5. Explain the procedure you will follow to replace the rear axle bearings of a car (20 marks)