



TECHNICAL UNIVERSITY OF MOMBASA

Faculty of Engineering and Technology
Department of Mechanical & Automotive Engineering
UNIVERSITY EXAMINATION FOR:
Diploma in Automotive Engineering
EAU 2204: Vehicle Technology & Practice II
SPECIAL/ SUPPLEMENTARY EXAMINATION
SERIES: AUGUST 2019
TIME: 2 HOURS
DATE: Pick Date Aug 2019

Instruction to Candidates:

You should have the following for this examination

- *Student I.D. Card & Examination Pass*
- *Answer booklet*
- *Non-Programmable scientific calculator*

This paper consists of **FIVE** questions. Attempt **TWO** questions in section A and **ONE** question in section B.

Maximum marks for each part of a question are as shown.

Do not write on the question paper.

SECTION A

Question ONE

- a) State **TWO** advantages and **TWO** disadvantages of a power assisted steering system. **(4 marks)**
- b) With the aid of a diagram, explain the operation of an integral type power assisted steering. **(16 marks)**

Question TWO

- a) Outline **TWO** advantages of auxiliary brakes used in vehicles. **(2 marks)**
- b) Name **TWO** types of auxiliary brakes used in vehicles other than eddy current. **(2 marks)**
- c) With the aid of a diagram, explain the operation of eddy current auxiliary brakes. **(16 marks)**

Question THREE

- a) State THREE advantages of an air suspension system. **(3 marks)**
- b) With the aid of a diagram describe the construction and operation of a fifth wheel coupling. **(17 marks)**

SECTION B

Question FOUR

Describe a procedure for inspecting a public service vehicle for road worthiness. The inspection should highlight on legal and safety requirements. **(20 marks)**

Question FIVE

A vehicle fitted with sliding mesh gearbox has been brought to the workshop for repair. Describe the procedure of overhauling the unit, include the necessary preparation. **(20 marks)**