



MACHAKOS UNIVERSITY COLLEGE

(A Constituent College of Kenyatta University)

University Examinations for 2015/2016

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF MECHANICAL AND MANUFACTURING ENGINEERING

FIRST SEMESTER EXAMINATION FOR DIPLOMA IN MOTOR VEHICLE
ENGINEERING

VEHICLE BODYWORKS TECHNOLOGY THEORY AND PRACTICE I

DATE: 10/8/2016

TIME: 2:00 – 4:00 PM

INSTRUCTIONS

This paper contains five questions, answer question 1 and any other two from section B

SECTION A

1.
 - a) State five basic rules concerning dress and behavior which demonstrate personal safety in the workshop. (5 marks)
 - b) List three necessary precautions for safety in the workshop and describe each one briefly with relevant examples. (6 marks)
 - c) With an aid of a clear sketch, describe two safety signs in a vehicle body-shop. (4 marks)
 - d) Name any five exterior and interior vehicle body features. (5 marks)
 - e) Briefly describe the panel beating process. (10 marks)

SECTION B

2.
 - a) List ten hand tools and equipment found in a vehicle bodyshop. (5 marks)
 - b) What safety precautions should be considered before using an electric drill? (3 marks)

- c) Sketch and describe four hand tools used in panel beating. (8 marks)
- d) Explain the care and storage of:
- i. Scrapper.
 - ii. Anvil dolly. (4 marks)
- 3 a) with aid of clear diagrams describe four types of solid rivets. (8 marks)
- b) Name any four type of adhesives that could be used in body repair. (2 marks)
- c) Explain the purpose of nuts and bolts in body repair work. (4 marks)
- d) Statethree factors to consider when selecting the type of rivet to use. (3 marks)
- e) With an aid of a sketch, name a type of joint that would be used when solid riveting. (3marks)
4. a) with aid of clear sketches describe the following vehicle body designs:
- i. coup'e
 - ii. hatchback
 - iii. saloon car
 - iv. convertible (8 marks)
- b) Name two parts of a vehicle interior you will find an air bag. (2 marks)
- c) List any four features associated with a limousine vehicle body. (4 marks)
- d) State and explain three factor to consider during vehicle interior and exterior design. (6 marks)
- 5). a) List down five cutting tools used in vehicle body work repair. (5 marks)
- b) Describe a suitable application for;
- i. grid dolly
 - ii. toe dolly (4 marks)
- c) With aid of sketches briefly describe any three types of panel beating hammers. (6 marks)
- d) Explain three care and storage guidelines of panel beating tools and equipment. (3 marks)
- e) Explain two types of body paints coats done during painting. (2 marks)