



ELIZADE UNIVERSITY, ILARA-MOKIN,
ONDO STATE, NIGERIA

DEPARTMENT OF AUTOMOTIVE ENGINEERING

FIRST SEMESTER EXAMINATIONS

2020/2021 ACADEMIC SESSION

COURSE: ATE 507 – Automobile Maintenance & Testing (3 Units)

CLASS: 500 Level Automotive Engineering

TIME ALLOWED: 3 Hours

INSTRUCTIONS: Answer Any Five Questions

HOD'S SIGNATURE

Date: March, 2021

Question 1 (12 Marks)

- What is maintenance engineering?
- Why is the maintenance of equipment still a challenge?
- List and explain four responsibilities of a maintenance engineer in an automobile workshop?
- Define the following terms as it relates to maintenance engineering.
 - Downtime
 - Maintainability
 - Overhaul
 - Retrofits

Question 2 (12 Marks)

- Distinguish between servicing and maintenance
- Describe the general maintenance chart.
- Define preventive maintenance? List four preventive maintenance activities to be done on a vehicle

Question 3 (12 Marks)

- List six (6) common tools used during vehicle engine maintenance.
- Outline the classification of automotive engine based on the following:
 - type of ignition
 - cooling system
 - type of aspiration and
 - camshaft location
- Write five (5) procedures for engine block diagnosis and repair.

Question 4 (12 Marks)

- Write four (4) needs for wheel balancing and alignment
- Describe the two types of balancing.
- List six (6) steps involved in tire/wheel assembly.

Question 5 (12 Marks)

- a. Write six (6) procedure or steps involved in car bodywork repair.
- b. List six (6) steps involved in body filling and metal finishing of a car.

Question 6 (12 Marks)

- a. Write four inspection procedure for exhaust system
- b. Identify six (6) mechanical system faults in an automobile
- c. Identify six (6) electrical/electronic system fault in an automobile
- d. List eight vehicle diagnostic equipment.

Question 7 (12 Marks)

- a. Write a short note on:
 - (i) improvement maintenance
 - (ii) corrective maintenance
 - (iii) schedule maintenance
 - (iv) on-condition maintenance
- b. List three possible causes and remedies for engine that starts easily but dies after a few seconds.