



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.