AUTO MECHANICS

EXAMINATION SCHEME

There will be three papers, Papers 1, 2 and 3 all of which must be taken. Papers 1 and 2 shall be a composite paper to be taken at one sitting.

PAPER 1: will consist of forty multiple-choice objective questions all of which are to be answered in 1 hour for 40 marks.

PAPER 2: will consist of five essay questions. Candidates will be required to answer any four questions in 1½ hours for 60 marks.

PAPER 3: will consist of two practical tests both of which must be carried out by candidates in 2 hours for 100 marks. For the practical test, schools will supply materials needed locally.

SAMPLE QUESTIONS

PAPER 1
(OBJECTIVE)

1. Which of the following types of maintenance require(s) replacement of parts?
   A. Predictive and preventive
   B. Corrective and preventive
   C. Corrective only
   D. Predictive only

2. Which of the following is a general purpose fire extinguisher?
   A. Dry chemical
   B. Wet sand
   C. Water
   D. Foam

3. The engine compression tester reading is measured in
   A. Nm/m²
   B. Kpa.
   C. Mm/H₂O.
   D. Mm. Hg.
4. Which of the following drive arrangements does **not** make use of a *transaxle*?
   A. Front engine, front wheel drive  
   B. Rear engine, rear wheel drive  
   C. Four wheel drive  
   D. Front engine, rear wheel drive  

5. When checking the compression of an engine, the compression tester is connected to the  
   A. exhaust manifold.  
   B. intake manifold.  
   C. spark plug hole.  
   D. oxygen hole.  

6. The component that raises the temperature of refrigerant to a temperature higher than the ambient is the  
   A. condenser.  
   B. receiver-drier.  
   C. evaporator.  
   D. compressor.  

7. The class of drivers’ license required by a tractor operator is the  
   A. class G.  
   B. class F.  
   C. class E.  
   D. class B.  

8. Which of the following is **not** a component of a car air conditioning system?  
   A. Expansion valve  
   B. Radiator  
   C. Evaporator  
   D. Condenser  

9. The car air conditioner is directly driven by  
   A. flywheel.  
   B. camshaft.  
   C. battery.  
   D. crankshaft.
10. Which of the following is the function of the differential unit? It
   A. allows the half shafts to rotate at different direction.
   B. reduces the tendency for tyres dragging when cornering.
   C. changes the direction of the drive through 90°.
   D. increases torque by reducing speed.

**PAPER 2**

(ESSAY)

1. (a) (i) Sketch a rigid beam front suspension system.
       (ii) Label four of its parts.
   (b) State the functions of any two parts of the system labelled in a)(ii).
   (c) State two forces acting on the axle shaft?

2. (a) (i) With the aid of a sketch, describe the operation of the water cooling system of a motor vehicle.
       (ii) Label three parts of the sketch in 2 (a)(i) above.
   (b) Name the materials used in the manufacturing of the following:
       (i) cylinder head;
       (ii) cylinder head gasket;
       (iii) engine block.

3. (a) Define transmission system as applied to a motor vehicle.
       (b) (i) Sketch a clutch plate.
       (ii) Label any three parts of the sketched clutch plate in (b)(i) above.