

Marking scheme

Auto Automotive Engineering IV 2025

1. D, E, A, D, C, E, D, D, A and C, B

2. B, G, D, D, A, C.

3 a) Vehicle inspection is the process of checking the condition of a car's engine to ensure it is functioning properly.

Engine assembly

→ Is the part where the mechanical engine blocks, Clutch and transmission cases and the sturdy Cylinder heads are welded with the other engine.

- b) — Camsheft installation tools.
— Connecting rod tools.
— Crankshaft turning tools.
— Cylinder head assembly tools.
— Cylinder Honing.
— Engine block tools.
— Freeze plug tools.
— oil pump primer.

4 a) Primary system: Piston, cylinder head, Valves and camshaft.

operating system: air intake, fuel, exhaust, cooling, ignition, Lubrication and starting system.

Accessory systems: Alternator, fuel pump, Lubrication oil, air compressors, hydraulic Pumps and Engine starters.

D) Primary stem:

5a) Advantages of brake disk.

- i) More resistant to brake fade.
- ii) Better cooling efficiency.
- iii) Water and dirt resistant.
- iv) Less maintenance.
- v) Greater surface area for a given weight of brake.

Disadvantages of brake disk.

- i) Brake noise
- ii) Vulnerability to corrosion.
- iii) More expensive

b) Brake mechanism are mounted on the frame somewhere near the upper part of the wheels while disk brakes sit at the centre of each wheel and stop the bike by squeezing a brake pad against a rotor mounted around the hub.

6 a) Water flows through a pipe and then spins the blades in a turbine which in turn spins a generator that ultimately produces electricity.

5) Hale power station - Tanga.

- i) Nyumba ya Mungu Power station - Kilimanjaro.
- ii) Midaoni Power station - Morogoro.
- iii) Mtera Power station - Tanga Dodome.
- iv) Kakoma hydroelectric power station - Kagera.

i) Kikonge Power Station — Ruvuma

ii) Tuhus Myerere Power Station — Morogoro

iii) Songwe Power Station — Mbeya

iv) Ruvuma — Kagera

Mwanga — Iringa

Kihansi — Morogoro

New Pangani — Tanga

Uwemba — Mjombe