

MARK SCHEME

Section (A)

- (1) (i) A (ii) D (iii) D (iv) D (v) C (vi) B (vii) D
(viii) C (ix) B (x) D (10 marks)

2.

i	ii	iii	iv	v	vi	
e	g	A	D	J	F.	(6 marks)

(54 marks)

3(i) Is a renewable energy obtained from moving or falling water.

(ii) Kihansi, Kedatu (Morogoro)

(b) Mtera (Dodoma)

(c) Nyumbaya Mugu (Kilimanjaro)

(d) Hake and Pangani (Tanga)

4. (i) Is defined as the energy generated or produced from organic material that are derived from plant or animals.

(ii) Contain in the interior of the Earth is called geothermal energy.

5. (i) Petrol engine fuel system and diesel engine system components. fuel tank, fuel pump, filter and injectors or carburetor.

(ii) Carburetor or the injection system

6. (i) Radiator water pump thermostat, heater core and freezing plug.

6 (ii) To maintain a minimum operating temperature in the cars engine.

7 (i) The relief valve limit the maximum pressure of the oil in the system.

(ii) To allow the oil to drain out when changed.

* (A) or MacPherson strut, double wishbone, and multi-link system and Air Suspension

(i) leaking fluid on exterior of shocks/struts

(b) Nose dive when braking

(c) If you experience similar vibrations on smooth road.

SECTION C. (30 marks)

9 (A) (i) collects the exhaust fumes released from the engine cylinders and direct them to the catalytic converter.

(ii) Filter out harmful byproduct in the exhaust gases and burn them up.

(B) (i) To give an engine extra power without sacrificing fuel efficiency.

(ii) Including throttle body, air filter and mass flow sensor.

(C) (i) To reduce engine noise emission.

(ii)

10. (A) Is to cooling, cleaning and reducing friction

(ii) Start by paying attention to the engine oil formula.

(B) (i) Lubricant degradation in gearbox
Bearing with Contaminated grease or over greased, Contamination of Lubricant or bearing.

(C) (i) ⁱⁱⁱ Mean fuels or power sources which serve at least partly as a substitute for fossil oil source in the energy supply. To transport contribute, to its decarbonisation and enhance the environmental performance of the transport sector.

(ii) Derived from As. biofuel, ethanol, methanol hydrogen, Coal, cleave liquid fuel, electricity natural gas, propane gas, or synthetic transportation fuel.

11. (a) (i) They support its weight, absorb shocks, and transmit braking forces, torque and traction to the road surface.

(ii) Tyre parts, Beads, bead filler, radial cord body, inner liner, belt plies side wall and tread.

(b) (i) (a) - Slow Air leakage - In case of a puncture the air in the tubeless tyre leaks more gradually.
(ii) Better Safety. Less chances of accidents due to slow air leakage.

- It provides the driver enough time to control the vehicle

(iii) Better fuel Efficiency - Light weight due to the absence of a tube

(iv) Easy repair. In case of a puncture or leakage.

(v) Better fuel efficiency. The absence of a tube makes tubeless tyres lighter

(vi) Better heating - Tubeless tyres are designed to dissipate heat more effectively than tube type tyres because they are in direct contact with the rim.

ii B (a). @ Natural and Synthetic, Rubber, (also known as polymer

(i) A tyre balance corrects the weight imbalance on your tire and wheel assemblies while Alignment correct the angle of the tires so they always come in contact with the road in the right way.

(ii) To avoid unnecessary wear on your tyres steering suspension and brake.