Sangam S.K.M College-Nadi

Year 13

Agricultural Science

Worksheet 2

Solution

WEEK 3

Question:

1) State **how** the organic production improves trading in Fiji.
    - Organic agriculture provides important opportunities for Fiji to export a number of high-value, low volume crops to niche markets, thereby enhancing economic sustainability and reduce import.
2) State the **purpose** of world trade organization.
    - The WTO provides secure and predictable market access to more than 153 Members. It helps Fiji pursue free trade and minimise trade distortions.
    - Its main function is to ensure that trade flows as smoothly, predictably and freely as possible.
3) Discuss **two ways** international marketing impacts the import and export.
    - International marketing looks into meeting the demand of the customers from other international market.
    - It looks into satisfying the market requirements from other countries and also the importing country.
4) Discuss **two** possible sustainable solutions to address the current issues in Trading.
    - Biological and Organic production – effective and sustainable techniques.
    - Trade Facilitation and Market Access

5) Explain **two** trade agreements Fiji is party to.

- The Melanesian Spearhead Group (MSG) ii. -trade Agreement which is a free trade agreement that allows trade to take place freely between Fiji, Papua New Guinea, Vanuatu and Solomon Islands.
- The Pacific Agreement on Closer Economic Relations (PACER) vii. -it also provides for assistance to FICs including Fiji, to enable them to address customs matters, standards and conformance and quarantine issues.

6) Describe **two** sustainable development goal of economic sector.

- Decent work and economic growth.
- Affordable and clean energy Industry, innovation and infrastructure

  Responsible consumption and production

7) Define the term **reciprocating.**

Is a part of a machine moving backwards and forwards in a straight line?
"The reciprocating piston of a traditional internal combustion engine"

8) Describe the **power stroke** of spark ignition engine.

- Power stroke: With both valves closed, the spark plug between the intake and exhaust valve will fire, igniting the air/fuel mixture. The resulting explosion forces the piston downward and rotates the crankshaft, which in turn propels the vehicle.

9) Discuss what is a **crankcase** in the four-stroke engine.

- A *four-stroke* (also *four-cycle*) *engine* is an internal combustion (IC) *engine* in which the piston completes four separate strokes while turning the *crankshaft*.

10) State the purpose of **Thermostat** in cooling system.

- The thermostat is like a valve that opens and closes as a function of its temperature. The thermostat isolates the engine from the radiator until it has reached a certain minimum temperature. Without a thermostat, the engine would always lose heat to the radiator and take longer to warm up.

11) State two **differences** between two stroke and four stroke engine.

- In a 2-stroke engine, all five functions of the cycle are completed in only two strokes of the piston (or one revolution of the crankshaft). In a 4-stroke engine, the five functions require four strokes of the piston (or two revolutions of the crankshaft).

12) List three enemies of a machine.

- Wear & tear
- Heat
- Dirt

13) Explain the main **function** of the cylinder head.

- The main function of cylinder head is to seal the cylinder block and not to permit entry and exit of gases on cover head valve engine. Cylinder head is usually made by cast iron or aluminium. It is made by casting or forging and usually in one piece.

14) Give the correct function of piston rings.

- Piston should be light and sufficient strong to handle the gas pressure generated by combustion of fuel.

15) Discuss the power and the exhaust stroke of **two** stroke engine.

- The piston is at the top of the compression stroke and is about to move downwards.
- Fuel and air mixture is ignited by the spark plug producing a power stroke sending the piston downwards, as the piston deflector deflects the burnt gasses towards the direction of the exhaust port.
- The exhaust gasses escape through the exhaust pipe as the piston passes the exhaust port. The power and exhaust stroke has taken place.
- The next cycle resumes.