

Ba Sangam College
Year 13
Agriculture
Worksheet 1

Answer the following question. **Note:** Answer with blue or black ink, no use of pencil.

Strand: AS 13.2 Farm Management

Sub-Strand: AS 13.2.1 Physical Capital

CLO: AS 13.2.1.1

Lesson: 1

Topic: Essential Parts & Functions of Internal Combustion

Objective:

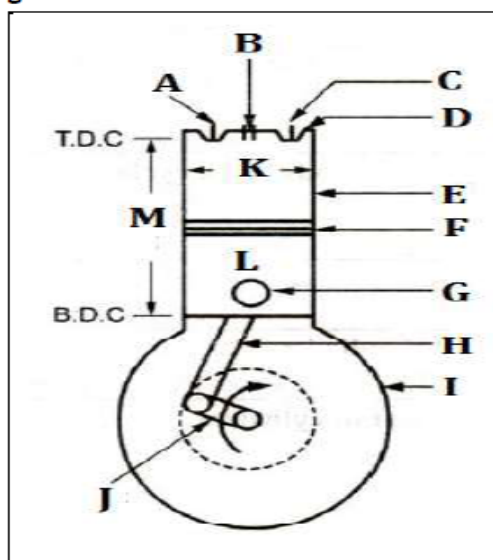
Describe the parts of the internal combustion engine.

- 1) Explain **two** possible ways to **classify** internal combustion engines.

- (i) _____

(ii) _____

- 2) The diagram given below illustrates the essential **parts of an internal combustion engine**.



Source: Adapted from Year 13 Agricultural Science Text Book

Identify and label parts A to M of an internal combustion engine

- A - _____
B - _____
C - _____
D - _____
E - _____
F - _____
G - _____
H - _____
I - _____
J - _____
K - _____
L - _____
M - _____

3. State the top agricultural and non- agricultural products that are exported and imported
4. Identify Fiji's top trading countries
5. Discuss the trading trend and its impact on Fiji's economy
6. Identify current issues which impact trade.
7. Discuss current issues and their impact on trade
8. Discuss possible sustainable solutions to address the current issues.
9. Define green economy.
10. State examples of green economy concept in the community
11. Explain the benefits of green economy towards achieving the SDG
12. Describe parts of the internal combustion engine and their functions.
13. Identify the types of internal combustion engines.
14. Discuss how the two stroke and four stroke engine works in farm machines.
15. Differentiate between a two stroke engine and four stroke engines.
16. Discuss the maintenance of internal combustion engine systems in farm machines
17. Discuss three enemies of machines
18. Name **one** mobile element needed by plants in large amounts.
19. Identify **one** equipment used for soil sampling.
20. Explain how calcium carbonate in the soil contributes to soil alkalinity.
21. State one **implication** of cation exchange capacity in the soil.
22. Explain the relationship between chemical properties of soils and the husbandry techniques.
23. Discuss the importance of soil chemical properties in the growth of plants.

Multiple choice

1. The movement of the piston from one dead centre to another is called a
 - A. stroke
 - B. rotation
 - C. revolution
 - D. combustion
2. The function of the spark plug in an engine is to
 - A. spray fuel
 - B. remove burnt gases
 - C. ignite the fuel and air mixture
 - D. connect the piston to the crankshaft

3. The farmer wanted to apply for a loan from the Fiji Development Bank to extend the farm size and was required to produce a statement on the worth of the farm business by 30th July, 2020. The farmer is going to produce a statement of the farms
 - A. balance sheet
 - B. cash flow budget
 - C. income statement
 - D. net worth statement
4. The soil water that facilitates the uptake of nutrients by plant roots in the soil is
 - A. adhesion water
 - B. cohesion water
 - C. gravitational water
 - D. hygroscopic water
5. The nutritional deficiencies in soil can be identified by
 - A. plant analysis and soil testing.
 - B. soil testing and the study of soil colour.
 - C. plant testing and the study of soil colour.
 - D. plant analysis and the study of soil formation.
6. Which of the following is an environmental benefit of green economy?
 - A. Increased Gross Domestic Product
 - B. Effective use of natural resources
 - C. Improved quality of life
 - D. Reduced inequality
7. The pH of an alkaline soil does not change when the recommended amount of gypsum is applied so is described as having a high rate of
 - A. porosity
 - B. turgidity
 - C. buffering
 - D. productivity
8. The plant breeding method that produces superior characteristics in plants is
 - A. inbreeding
 - B. outbreeding
 - C. line breeding
 - D. cross breeding.
9. Which of the following ecosystems is referred to as the rainforests of the sea?
 - A. Ocean
 - B. Estuaries
 - C. Coral reefs
 - D. Intertidal zone

10. Tilapia fish were introduced at the Nacocolevu Agriculture Research Station in 1954 mainly to supplement
- A. weed control
 - B. protein for pigs
 - C. pond maintenance
 - D. breeding purposes

Essay Writing

QUESTION 1

To improve trading in Fiji strategies can be undertaken to overcome issues that are affecting the economy.

With reference to the above statement, discuss **three** ways in which the following strategies can improve trading in Fiji

- Local production
- Import substitution
- Organic production

QUESTION 2

Maintenance is the regular care machines need to work safe and well.

With reference to the above statement, discuss **three** regular maintenance the following tractor systems require

- Cooling system
- Air intake and exhaust system
- Electrical system