

AGRICULTURAL SCIENCE WORKSHEET YEAR 11 : WEEK ____

Marks : 20

1. DEFINE : [5 marks]
- Heat sterilization
 - Pickling
 - Munsell colour system
 - Fortification
 - Soil degradation
2. Differentiate between Environmental landscape and Residential landscape. [2 marks]
3. Differentiate between the term “**Treatment**” and “**control**” in relation to conducting a field trial. [2 marks]
4. Describe one important role of **Biosecurity Authority** of Fiji in relation to **safeguarding** Fiji’s unique biodiversity. [1 mark]
5. State one function of the following farm buildings used in agricultural activities. [2 marks]
- Green house
 - Garage
6. Differentiate between the terms **farm budget** and **farm profit and loss** statement. [2 marks]
7. State **two** factors that influence the **colour** of the soil? [2 marks]
8. Explain how the following factors affect the depth of the soil in an area?
- Age of the soil
 - Erosion [2 marks]
9. Name three types of soil structure and state in which layer of the soil profile are they found? [3 marks]

The end .

AGRICULTURAL SCIENCE WORKSHEET YEAR 11 : WEEK ___

INSTRUCTION

Marks : 12

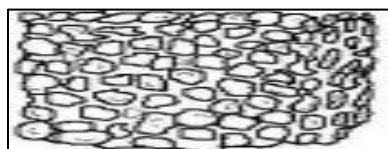
Answer all the questions in your exercise books.

MULTIPLE CHOICE

- The **number of the animals on a given amount of land over a certain period of time** e.g. 500 head per hectare is termed as _____
A. animal count. B. risk factors C. efficiency D. stocking rate
- The physical property that describes the **arrangement of the solid parts** with **pore spaces** between them could be best described as?
A. soil texture B. soil porosity C. soil structure D. soil consistence
- The ability of the water and air to flow in between the soil particles is termed as
A. drainage B. infiltration C. porosity D. permeability
- The second most abundant mineral in the earth's continental crust with the chemical formulae **SiO₂** is termed as _____
A. quartz. B. aluminium oxide
C. feldspar D. perlite
- Study the type of **soil structure** shown in the diagram below is best described as

The type of soil structure could be best described as:

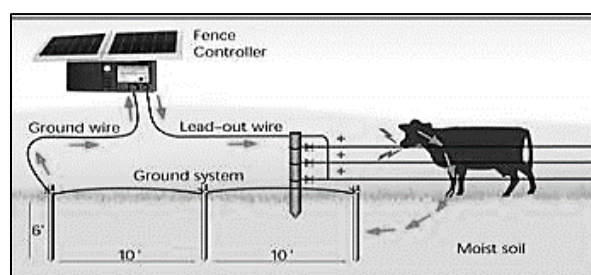
- prismatic
- platy
- granular
- blocky



- The diagram below shows a type of fencing used on the pasture paddocks. Study the diagram below and answer the question that follows:

The type of fencing is best used to

- prevent worm infestation in cattle.
- add nutrients to the pasture.
- prevent the wastage of pasture.
- to value add the pasture.



REF. MOE Agri. Text

Short Answer Questions

- What is another term for **tissue culture**. [1 mark]
- State **one advantage** and **one disadvantage** of Tissue culture. [2 marks]

The end

AGRICULTURAL SCIENCE WORKSHEET YEAR 11 : WEEK ___

INSTRUCTION

Marks : 12

Answer all the questions in your exercise books

MULTIPLE CHOICE

1. The soil type that has a very **good drainage** system is best described as
A. sandy loam. B. silty loam C. clay soil D. clay loam

2. **It is important to consider the 6 M's during the process of Decision making process.** The 6 M's are Men, money, materials, methods, _____ and _____.
A. markets and machines. B. mentor and machines
C. markets and management D. markers and matching

3. The physical property that describes how loosely or closely the soil particles are held altogether is best termed as _____.
A. soil texture. B. soil temperature C. soil bulk density D. soil consistency

4.

"as organic matter decomposes it changes from brown to black."

From the above statement it could be concluded that **Dark/Black** soil's have

- A. a very low organic matter content B. a very high organic matter content
C. a moderate level of organic matter content D. only inorganic matter and no organic matter

5. The flow or movement of water **into** the soil is termed
A. Infiltration. B. Gravitational water. C. Soil water D. Percolation.

SHORT ANSWER

1. Refer to the extract below and answer the questions that follow

Imagine you are the Boss of your firm /company which is producing Vitamin-A added FMF flour and marketing it all over Fiji.

- i) Name the **method** of value adding used by your company? (1 mark)

- ii) State **one advantage of value adding** of agricultural goods? (1 mark)

2. Describe the process of **straining** in relation to **fencing**? (2 marks)

3. Give one function of the following farm structures? (3 marks)

	Farm structure	Function
i	Barn	
ii	Farm office	
iii	Chemical storage	

The end

AGRICULTURAL SCIENCE WORKSHEET YEAR 11 : WEEK ___

INSTRUCTION

Marks : 12

Answer all the questions in your exercise books

SHORT ANSWER QUESTIONS

- 1) Name **two** types of **rocks** that are commonly found ? (1 mark)
- 2) Differentiate between **soil fertility** and **soil productivity**? (2 marks)
- 3) Name **two** most common types of **minerals** found on earth? (1 mark)
- 4) Briefly describe the effect of the following physical property in Agriculture? (3 marks)
 - i. **soil consistency**
 - ii. **soil colour**
 - iii. **soil texture**
- 5) State the **importance of the knowledge of soil depth** to farmers? (1 mark)
- 6) List down **two uses of soil temperature** in relation to plant growth? (1 mark)
- 7) List the properties of the following types of soil? (2 marks)
 - i. **sandy soil**
 - ii. **clay soil**
- 8) Identify the type of structure found in the following horizons? (1 mark)
 - i. A- horizon
 - ii. B- horizon

The end

AGRICULTURAL SCIENCE WORKSHEET YEAR 12 : WEEK 1

INSTRUCTION

Marks : 12

1. The plants and organisms with plant like features which inhabit the soil are classified as
A. Soil flora B. Soil biota C. Soil fauna D. Soil microbes
2. Protein is one of the main building blocks of the animals body and is composed of chains of _____.
A. fatty acids B. amino acids C. roughage D. fibre
3. One of the **advantages** of using **GMO** product is:
A. Higher yields obtained from same land area B. May lead to new diseases of plants and animals
C. Tax placed on GMO crops causes price increase D. Kills other beneficial organisms
4. Another term used for calving process is _____
A. Vaccination B. Castration C. Lactation D. Parturition
5. A set of tools that uses living organisms to make, modify or improve a product is termed as
A. Biofuels B. Eutrophication C. Biotechnology D. Nutrient supplementation
6. The **type of budget** used to determine when cash receipts and expenses will be encountered for the whole farm, over a period in the future is called
A. Partial budget B. Cash flow budget C. Enterprise budget D. Whole farm budget
7. The washing away of excess fertilizers from the farm into rivers and lakes may encourage
A. Eutrophication B. Volcanic eruption C. Siltation D. Leaching
8. The condition related to the **supply of food and individual's access** to it is referred to as
A. food access B. food utilization C. food preservation D. food security
9. The average composition of **milk fat** in a cow's milk is
A. 3.7% B. 4.9% C. 87.2% D. 0.7%
10. Which of the following trees is a member of the **edible herb** family?
A. Rosemary B. Lantana C. Soursop D. Coffee
11. The term given for **land use system involving trees combine with crops or animal** on the same area of land is termed as:
A. Biodiversity B. Agroforestry C. Mono cropping D. Mangrove zonation

12. The type of **budding** shown in the diagram below is

- A. T- budding
- B. Top budding
- C. Patch budding
- D. Block budding



Ref. Year 12 M.O.E. Text, Pg No. 51

The end

AGRICULTURAL SCIENCE WORKSHEET YEAR 12 : WEEK 2

INSTRUCTION

Marks : 12

1. The **method** used for growing plants in closed containers made up of glass as illustrated in the diagram below is called

- A. Terrarium garden
- B. Potted plant
- C. Dish garden
- D. Bonsai



2. The type of flower arrangement style illustrated in the diagram below is

- A. Ikebana
- B. Fan shape
- C. L- shaped
- D. Equilateral triangle



Ref. M.O.E Year 12 text. Pg no. 93

3. The **method** of lawn establishment that is commonly used in place of seeding for stoloniferous grass varieties is called :

- A. Hydromulching
- B. Plugging
- C. Sprigging
- D. Sodding

4. The **type of agroforestry** system that involves growing of **crops between trees** on the same piece of land is called

- A. Agrosilviculture
- B. Agropastoral
- C. Silviculture
- D. Agrosilvopastoral

SHORT ANSWERS

1. a. Describe **one** adaptation **method recommended for farms affected by frequent flooding.**

[2 marks]

b. **Explain** one risk to food security.

[2 marks]

c. What does WHO stand for in relation to reduce the transmission of Zoonosis.

[1 mark]

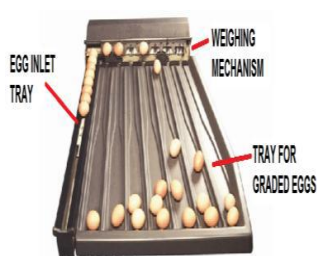
d. **Name** the small machines shown in the diagram below.

a.



Ref. M.O.E text, Year 12 pg no. 80

b.



Ref. M.O.E text, Year 12 pg no.21

[2 marks]

e. Explain **one limitation** when using gross margin.

[1 mark]

The end

AGRICULTURAL SCIENCE WORKSHEET YEAR 12 : WEEK 3

INSTRUCTION

Marks : 12

1. Matching : Students are to write the letter of the best description from list B in the space provided.

[10 marks]

LIST A	LIST B
1. ___ Mitigation	A. Land degradation, Agri. Diseases, water crisis
2. ___ Vaccines	B. Strongest fibre, used to make bullet proof vests
3. ___ Spider Silk	C. genetically altered food containing nutrients to fight malnourishment
4. ___ Food Security	D. conditions related to food supply & its availability to individuals
5. ___ Biotechnology	E. Orthene, Ambush, Rat baits
6. ___ Pesticides	F. set of tools using living organisms to make/modify products
7. ___ Biofuels	G. antigenic proteins from infectious pathogens which trigger immune response when ingested
8. ___ Challenges To Food Security	H. Bio-oil. Bio-gas
9. ___ Nutrient Supplementation	I. Tissue culture, Artificial insemination
10. ___ Plant & Animal Breeding Techniques	J. Human activities that fastens the rate of climate change

2. State **one** advantage of pollution. [1 mark] (ref page no. 9)

3. Explain one reaction of the farming community towards pollution. [1 mark]

The end .

AGRICULTURAL SCIENCE WORKSHEET YEAR 12 : WEEK 4

INSTRUCTION

Marks : 12

Answer all the questions in your Ex. Books

1. Differentiate between whole farm budget and a partial budget in relation to the number of farming enterprises involved. [2 marks]
- a. Discuss **why** farm machines should be maintained and stored well. [2 marks]
- b. **Differentiate** between budgeting and farm evaluation in relation to a farming enterprise. [2 marks]
- c. State **two** use of a whole farm budgets. [2 marks]
- d. Below is a summary of The Green Farm's Cash Flow budget for January and February, 2019. Use the information to calculate the **Farm's Opening and closing** balance for January and February as labelled a, b and c.

	Jan \$	Feb \$
Opening balance	2000	b _____
Total income	6000	8000
Total expenditure	3000	2000
Net cash flow	3000	6000
Closing balance	a _____	c _____

[3 marks]

- e. Explain **one** reason for plant improvement. [1 mark]

The end.

AGRICULTURAL SCIENCE WORKSHEET YEAR 12 : WEEK 4

INSTRUCTION

Marks : 12

Answer all the questions in your Ex. Books

1. a. Explain **one** advantage of preparing a partial budget. [2 marks]
- b. Below is the analysis of a farm's financial records for Pawpaw and Ginger enterprises. Interpret this information to answer the questions followed.
[Show all your working]

Area 1 hectare /crop	Pawpaw \$	Ginger \$
Total income	12 600	9 800
Total Variable cost	2 500	1 500
Fixed cost	1 500	1 000
mandays	100 days	50 days

- i. Calculate the **gross margin** for Pawpaw. [2 marks]
- ii. Which crop would you choose **if capital is limited?** [3 marks]
- c. Which crop would you choose **if Labour is limited** [3 marks]
- d. Explain briefly **one requirement** of soil organism in order to survive and multiply. [1 mark]
- e. Explain **one** advantage of planting and maintaining **special forest.** [1 mark]

THE END .

AGRICULTURAL SCIENCE WORKSHEET YEAR 12 : WEEK 4

INSTRUCTION

Marks : 10

Answer all the questions in your Ex. Books

1. a. Explain **one** importance of harvesting trees using **Seed Tree Harvest** method. [2 marks]
- b. An example of a whole farm budget of a Beef cattle property which also has dairy cattle and sheep is shown in the table below.

CAPITAL INVESTED	\$	ANTICIPATED INCOME	\$
Land	70 000	Sale of sheep	15 000
Building	30 000	Sale of cattle	5 000
Stock Value	30 000	Sale of wool	2000
		Milk sales	40 000
TOTAL	_____	TOTAL	_____
ANTICIPATED EXPENSES	\$		\$
Fixed cost		Variable cost	
Equipment depreciation	1500	Pasture cost	8 000
Land lease	2000	Wages	4 000
Salary payment	7 000	Transport	300
Interest on loans	1 000	Fuel	500
		Veterinary fees	500
TOTAL	_____	TOTAL	_____
PROFIT/LOSS	_____		

- i. Calculate **all the totals** for the capital invested, anticipated income and anticipated expenses. [4 marks]
- ii. Calculate the **profit/ loss** made by the farmer. [**show all your working**] [2 marks]
- c. Distinguish between the processes of **topping and bucking** in relation to the cleaning of felled trees. [2 marks]

AGRICULTURAL SCIENCE WORKSHEET YEAR 12 : WEEK 5&6

INSTRUCTION

Answer all the questions in your Ex. Books

SECTION C

ESSAY QUESTIONS

[20 Marks]

There are **five** questions in this section. Answer **two** question only.

Write an essay of about 180-200 words. You may use sketches and illustrations to support your answer.

Each question is worth **10 marks**

QUESTION 1

Soil organisms are an essential part of soil which is used for agricultural purposes. Discuss three

- Importance of soil organisms [3 marks]
- Requirements of soil organisms [3 marks]
- Husbandry practices which assists in the growth of soil organisms [3 marks]

QUESTION 2

One of the soil conservation practices that the agriculture sector is encouraging is the agroforestry system of farming.

Discuss three

- Impacts of agroforestry system on a land use system [3 marks]
- Economic benefits of agroforestry practices [3 marks]
- Disadvantages of agroforestry practices [3 marks]

THE END

AGRICULTURAL SCIENCE WORKSHEET YEAR 12 : WEEK 7

INSTRUCTION

Marks : 10

Answer all the questions in your Ex. Books

1. Plants which store water in its leaves and stems and is adaptable to live arid conditions are called:

- A. Hydrophytes B. Mesophytes C. Xerophytes D. Epiphytes

4. The breed of **Bees** that is naturally resistant to Varoa and Tracheal mites is:

- A. Russian honey bee B. Caucasian honey bee
C. Italian honey bee D. Carnolian honey bee

5. Kapok tree is a plant which seasonally loose its leaves. This type of trees are known as:

- A. deciduous plant B. Evergreen plants
C. Annual plant D. Biennial plant

6. The type of palm tree shown in the picture below is :

- A. lipstick palm
B. Fiji Fan Palm
C. Cuban petticoat palm
D. Royal palm



Ref. YR. 12 M.O.E.Text

7. The stage of lawn establishment illustrated in the diagram below is:

- A. Seeding
B. Sod establishment
C. Plugging
D. Hydromulching



Ref. YR. 12 M.O.E.Text

8. The type of floral arrangement shown below is called:

- A. Wreath
B. Crescent
C. Inverted ' T ' D. Equilateral triangle



Ref. YR. 12 M.O.E.Text

9. The **stage** of **logging** timber as shown in the diagram is:

- A. Topping
B. Bucking
C. Skidding
D. Transporting



Ref. YR. 12 M.O.E.Text

10. Future Forest Fiji is a new company investing in Teak tree that are good source of timber. Growing trees for this purpose is classified as:

- A. Protection Forestry B. Recreation forestry
C. Production forestry D. conservation forestry

THE END

AGRICULTURAL SCIENCE WORKSHEET YEAR 12 : WEEK 8

INSTRUCTION

Marks : 12

Answer all the questions in your Ex. Books

- a. Name and explain the method of irrigation used in the pot plant as shown in the diagram below.



[2 marks]

- b. Differentiate between softwood and hardwood trees.

[2 marks]

- c. Explain **two values** of trees in Fiji.

[2 marks]

- d. Give one example of the following :

i. exotic tree: _____

ii. endemic tree : _____

[2 marks]

- e. State briefly two factors to consider when deciding a site for planting a tree.

- f. a. Differentiate between “Deciduous and Evergreen plants”.

[2 marks]

- b. Aloe vera plant is an example of “photophilous plant”.

Explain the term “photophilous plant”.

[2 marks]

THE END .