FIJI NATIONAL UNIVERSITY
College of Agriculture, Fisheries & Forestry
School of Agricultural Sciences & Forestry
Department of Crop Production
Trade Diploma in Agriculture
Final Examination
Semester I – 2019

AGO-411: Introductory Crop Production and Agro meteorology

Time Allowed: 3:00 hours **Total Marks: 100**

[An extra ten minutes is allowed for reading this paper]

INSTRUCTIONS

1. This paper consists of **05** pages.
2. Write **all** your answers in the **Answer Book** provided.
3. Write your student ID number on the front page of your **Answer Book.**
4. If you use extra sheets of paper be sure to show clearly the number of question being answered and to tie each sheet securely in your **Answer Book** at the appropriate place.
5. There are **three** sections in this paper. **Sections A** and **B** are **compulsory.** Note the **choices** in **Section C.**

"MOBILE PHONES ARE STRICTLY NOT ALLOWED"

SUMMARY OF QUESTIONS

Section	Description	Mark allocation
A	Part 1- Multiple Choice Questions	10 marks
	Part 2 - Matching	10 marks
	Part 3 - Fill in the Blanks	10 marks
B	Short Answer Questions	30 marks
C	Long Answer Questions	40 marks
	Total	**100 Marks**

Section A 30 Marks

Part 1- Multiple Choice Questions (10 marks)

- **Choose the best answer and put the letter of the best choice in the answer book.**

1. The branch of agriculture which deals with the production of fruits, vegetables, flowers, spices, ornamental plants and beverages is known as_____.
   a. horticulture
   b. agriculture
   c. domestication
   d. commercialization

2. The process of planting seeds in an appropriate seedbed is known as _____.
   a. broadcasting
   b. sowing
   c. transplanting
   d. drilling

3. The capacity of soil to produce crops of economic value and maintain the health of the soil for future use is best defined as_____.
   a. soil aeration
   b. soil productivity
   c. soil fertility
   d. soil consistence

4. The undesirable plants which compete with crops for water, soil nutrients, light and space thus reducing crop yield is known as_____.
   a. teletoxy
   b. pest
   c. pathogen
   d. weed

5. The process of separating the grain from the straw is known as _____.
   a. threshing
   b. cutting
   c. hauling
   d. storage

6. The science dealing with physical processes in the atmosphere that produces weather is _____.

a. Zoology
b. Meteorology
c. Weathering
d. Climatology

7. The flux of radiant energy from the sun to the earth is known as _____.

a. radiation
b. solar radiation
c. photosynthesis
d. climatology

8. A temperature at which the plant growth proceeds with greatest speed is known as _____.

a. maximum cardinal temperature
b. max growth temperature
c. optimum cardinal temperature
d. minimum cardinal temperature

9. An aggregation of minute drops of water suspended in the air at higher altitudes is known as _____.

a. hail
b. moisture
c. dew
d. cloud

10. An agricultural system that integrates livestock and crop production into one functional unit is known as _____.

a. integrated farming system
b. monoculture
c. farming system
d. cropping system

Part 2 **Matching** **(10 marks)**

Match the following words in List A to the description in List B.

Sl.no	LIST A		LIST B
1.	Agronomy	A	Study of climatic factors related to agriculture
2.	Disk harrow	B	Mimics the rice crop.
3.	Agro-meteorology	C	The natural removal of fine material from a coarser sediment by wind.
4.	Jungle Rice	D	A branch of agriculture
5.	Winnowing	E	A secondary farm implement
6.	Cirrus	F	Also known as precipitation
7.	Climate	G	The shorter wave lengths of the solar spectrum which is chemically very active.
8.	Rainfall	H	fibrous or hair-like clouds
9.	U.V. rays	I	It is the proportion of incoming solar radiation reflected by clouds or land surface back to the outer space.
10.	Albedo	J	The average weather condition of a place taken over a long period of time is termed as.

Part 3 **Fill in the blanks** **(10 marks)**

- **Fill in the blanks to complete the following statements.**

irrigation	**exosphere**	**drainage**	**noxious**
harvesting	**atmosphere**	**transplanting**	**light**
thermoperiodism	**orographic**	**puddling**	**cyclone**

1. Agriculture is influenced by a large number of factors, some of which can be controlled by man like soil and_____ while others are beyond their control is, climate.
2. _____ is ploughing the land with standing water so as to create an impervious layer below the surface to reduce deep percolation losses of water to provide soft seedbed for planting rice.
3. _____ gives a good stand establishment.
4. _____ weeds are undesirable, troublesome and difficult to control.
5. The removal of entire plant or economic parts after maturity from the field is called _____.

6. _____ is an example of a weather abnormality.

7. The part of the spectrum which is visible is known as _____.

8. _____ is the gaseous portion of the earth.

9. _____exerts effects on the growth and development of plants.

10._____ rainfall is produced when moist air is lifted as it moves over a mountain range and as a result the air rises and cools, clouds form and serve as the source of the rainfall, most of which falls upwind of the mountain ridge.

Section B **Short Answers** **(30 marks)**

- **Answer the following questions.**
- **Each question is worth 3 marks.**
- **There are 10 question only.**

1. Specify the definition of tillage.
2. Relate the three factors that influence the right time of sowing/planting seeds.
3. Determine the different types of planting geometry.
4. Specify at least two losses caused by weeds.
5. Interpret the term ratoon cropping.
6. Apply three factors affecting the climate of a region.
7. Relate any three causes of drought prevalent in Fiji Islands.
8. Determine the 3 (three) importance of air temperature on crop plants.
9. Specify any three observed impacts of climate change on the environment.
10. Relate three advantages of IFS.

Section C **Long Answers** **(40 marks)**

- **Answer only four questions from the five given questions.**
- **Answer each question in 250-300 words.**
- **Each question is worth 10 marks.**

1. Interpret how agriculture first began in Fiji.

2. Specify the different objectives of tillage.

3. Determine the different ways how nutrients are lost from the soil.

4. Relate surface irrigation and specify the advantages and types of surface irrigation systems in Fiji.

5. Interpret the observed changes in atmospheric composition and climate due to climate change.

THE END