

**College of Agriculture, Fisheries & Forestry
School of Agricultural Sciences
Department of Crop Production
Bachelor of Science in Agriculture
AGO 503 (Principles of Agronomy)**

Trimester III Final Examination - 2016 Total Marks: 100
Duration: Three Hours

INSTRUCTIONS TO STUDENTS

1. This paper consists of 5 pages. Please check to see that your paper is complete.
2. You are allowed 10 minutes extra reading time in which you are NOT permitted to write.
3. Attach all the sheets used as your answer paper in their correct sequence and secure with a string.
4. Use both sides of the answer sheet and write your candidate number on each sheet.
5. Write clearly the number(s) of the question(s) attempted on the top of each sheet.

| SECTION | PARTICULARS | TOTAL MARKS | THE ALLOCATIONS |
|----------------|---|--------------------|------------------------|
| A | Part 1: Multiple Choice Questions Part 2: Fill in the Blanks Part 3: True and False Part 4: Matching | 20 | 30 minutes |
| B | Short answers | 10 | 60 minutes |
| C | Long answers | 20 | 90 minutes |
| | Total | 50 | |

SECTION –A

There are four parts in this section. All the questions are compulsory. In your answer booklet write the question number followed by the answer.

Part 1: Multiple Choice Questions. Pick the correct answer.

(10×0.5=5 Marks)

- (1) Failure of mature viable seed to germinate under favorable condition of moisture is as _____
- Seed rest period
 - Seed health
 - Seed viability
 - Seed dormancy
- (2) On a certain land repeated cultivation of crops and fellow land in a certain sequence is known as _____
- Crop rotation
 - Cropping system
 - Cropping pattern
 - None of these
- (3) Growing two or more crops on the same piece of land in one agricultural year is known as _____ word.
- Multiple cropping
 - Monocropping
 - Solo cropping
 - Permaculture
- (4) Ploughing land with standing water to create an impervious layer below the surface to reduce deep percolation losses of water to provide soft seedbed for planting rice is known as _____
- Puddling
 - Sickling
 - Tillage
 - Flood tillage
- (5) The cotyledons remains under the soil surface _____
- Epigeal germination
 - Hypogeal germination
 - Late germination
 - None of these
- (6) Physical condition of soil resulting from tillage _____
- Structure
 - Texture
 - Tilth
 - None of these

(7) _____ refers to raising a crop with regrowth coming out of roots or stubbles after harvest of the crop.

- a. Ratooning
- b. Regrowth
- c. Tissue culture
- d. None of these

(8) Copper (Cu) is a _____ nutrient.

- a. Functional nutrients
- b. Macro nutrients
- c. Micro nutrients
- d. None of these

(9) Criteria of essentiality of plant nutrients was given by _____

- a. Robert hook
- b. Arnon
- c. Robert brown
- d. Molisch

(10) _____ is an appropriate combination of farm enterprises viz. cropping system, livestock, poultry, fisheries, forestry, bee keeping and the means available to the farmer to raise them for increasing profitability

- a. Farming systems
- b. Cropping system
- c. System
- d. None of these

Part 2: Fill in the blanks with appropriate answers give below. (5×1 = 5 Marks)

(1) The practice of growing one crop variety in pure stands on a field is referred to

(2) Weeds which are introduced from other countries are called as.....

(3) are industrially manufactured chemicals containing plant nutrients.

(4) Removal of weeds either manually or by handy tools is known as.....

(5) encompasses all measures taken to prevent the introduction and/or establishment and spread of weeds.

(Annual, Hand weeding, Perennial, Eradication, Herbicide, Fungicide, Control, Noxious weeds, Alien weeds, multiple cropping, Monocropping, Fertilizers, Manures, Prevention, Eradication)

Part 3: Mark true or false (10×0.5 =5 Marks)

- (1) Regular flow of income over the year is an advantage of crop rotation. (True/False)
- (2) Removal of excess water from the surface or below the surface of the soil to create favorable conditions for plant growth is drainage. (True/False)
- (3) In shifting cultivation farm is not at a permanent location. (True/False)
- (4) In a rotation crops with tap roots should be followed by tap root system. (True/False)
- (5) Sprinkler irrigation is also known as trickle irrigation. (True/False)
- (6) Growing one crop variety in pure stands on a field is referred to as multiple cropping. (True/False)
- (7) Coconut-Piper-Banana-Pineapple is an example of multi storied cropping system. (True/False)
- (8) The term “Agronomy” has been derived from Greek word. (True/False)
- (9) Albedo of cropped field ranges from 12-13. (True/False)
- (10) Cyperaceae family weeds are known as sedges. (True/False)

Part 4: Match the following. (5×1 = 5 Marks)

- | | |
|--------------------------------|------------------------|
| 1. C, H, O, N, P, K, Ca, Mg, S | A Bio-herbicide |
| 2. Groundnut | B Micro nutrients |
| 3. De-vine | C Macro nutrients |
| 4. Maize | D Hypogeal germination |
| 5. Fe, Mn, Zn, Cu, B, Mo, Cl | E Epigeal germination |

SECTION- B (Short Answers) (5×2= 10 Marks)

Answer all the questions. Each question carries 2 marks.

1. Differentiate between irrigation and drainage.
2. What are different objectives of tillage?
3. Write any five differences between manures and fertilizers.
4. Enlist five main principles of crop rotation.
5. Classify weeds on the basis of life cycle.

Section-C (Long answers)

(3×10=30 Marks)

Answer only **three** from the following questions. Answer each in 300 words. **Each question carries 10 marks.**

1. Write an essay on Agricultural Research Institutes in Fiji.
2. Define weeds. Discuss different losses caused by weeds.
3. What is shifting cultivation? Write its common features. Enlist its disadvantages.
4. Describe criteria of essentiality of plant nutrients. Enlist different nutrients essential for plant growth with their forms absorbed by plants.
5. What is sprinkler system of irrigation? Enlist its different components. Discuss its advantages and disadvantages.
6. Write an essay on “Agriculture: Scope and constraint in Fiji”.

THE END