



---

**COLLEGE OF AGRICULTURE, FISHRIES AND FORESTRY (CAFF)**

**B.Sc.in Agriculture I<sup>st</sup> Year**

**AGO-503 (Principles of Agronomy)**

---

**Date of Examination:**

**Time:**

**FINAL EXAM TRIMESTER- 1, 2014**

**DURATION 3 HOURS**

**INSTRUCTIONS TO STUDENTS**

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

<b>SECTION</b>	<b>PARTICULARS</b>	<b>TOTAL MARKS</b>	<b>THE ALLOCATIONS</b>
<b>A</b>	<b>Part 1: Multiple Choice Questions Part 2: Fill in the Blanks Part 3: True and False Part 4: Matching</b>	<b>35</b>	<b>30 minutes</b>
<b>B</b>	<b>Short answers</b>	<b>35</b>	<b>60 minutes</b>
<b>C</b>	<b>Long answers</b>	<b>30</b>	<b>90 minutes</b>
	<b>Total</b>	<b>100</b>	

## 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.**

**(1.5×10=15 Marks)**

- (1) Physical condition of soil resulting from tillage \_\_\_\_\_
  - a. Structure
  - b. Texture
  - c. Tilth
  - d. None of these
  
- (2) On a certain land repeated cultivation of crops and fellow land in a certain sequence is known as \_\_\_\_\_
  - a. Crop rotation
  - b. Cropping system
  - c. Cropping pattern
  - d. None of these
  
- (3) Agriculture is a \_\_\_\_\_ word.
  - a. *Latin*
  - b. *Arabic*
  - c. *Fijian*
  - d. *Indian*
  
- (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 \_\_\_\_\_
  - a. Puddling
  - b. Sickling
  - c. Tillage
  - d. Flood tillage
  
- (5) The cotyledons come above the soil surface \_\_\_\_\_
  - a. Epigeal germination
  - b. Hypogeal germination
  - c. Late germination
  - d. None of these
  
- (6) Failure of mature viable seed to germinate under favorable condition of moisture is as \_\_\_\_\_
  - a. Seed rest period
  - b. Seed health
  - c. Seed viability
  - d. Seed dormancy
  
- (7) Urea is a \_\_\_\_\_
  - a. Straight fertilizer
  - b. Complex fertilizer
  - c. Mixed fertilizer
  - d. Manure

(8) Iron (Fe) 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) The book “Horse Hoeing Husbandry” was written by \_\_\_\_\_

- a. Tisdale
- b. Jethro Tull
- c. Prem Singh
- d. Arnon and Stout

**Part 2: Fill in the blanks with appropriate answers give below. (1×5 = 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) .....weeds complete their life cycle within one year / one season.
- (4) Removal of weeds either manually or by handy tools is known as.....
- (5) ..... is complete removal of all live plant parts and seeds of the weed from an area.

(Annual, Hand weeding, Perennial, Eradication, Herbicide, Fungicide, Control, Noxious weeds, Alien weeds, multiple cropping, monocropping )

**Part 3: MARK TRUE OR FALSE.**

**(1×10 =10 Marks)**

- (1) Irregular 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) Cyperaceae and typhaceae family weeds are known as sedges. (True/False)

(9) Albedo of cropped field ranges from 12-13. (True/False)

(10) The term “Agronomy” has been derived from Latin word. (True/False)

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

- |                |                        |
|----------------|------------------------|
| 1. C,H,O,N,P,K | A Bio-herbicide        |
| 2. Cowpea      | B Primary nutrients    |
| 3. De-vine     | C Secondary nutrients  |
| 4. Rice        | D Hypogeal germination |
| 5. Ca, Mg, S   | E Epigeal germination  |

**SECTION- B (Short Answers) (7×5= 35 Marks)**

**Answer all the questions. Each question carries 5 marks.**

1. Define irrigation. Write four objective of irrigation?
2. Define tillage. What are different objectives of tillage?
3. Write five differences between manures and fertilizers.
4. Enlist five main principles of crop rotation.
5. What is harvesting? Describe different operations of harvesting in brief.
6. Classify weeds on the basis of morphology. Give suitable example.
7. Differentiate between soil fertility and soil productivity.

**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**