



COLLEGE OF AGRICULTURE, FISHERIES AND FORESTRY (CAFF)

SCHOOL OF AGRICULTURAL SCIENCES

DEPARTMENT OF CROP PRODUCTION

BACHELOR OF SCIENCE IN AGRICULTURE YEAR III

AGO 704 (Farming Systems and Sustainable Agriculture)

Date of Examination:

Time:

FINAL EXAMINATION TRIMESTER- 2, 2017

DURATION 3 HOURS

(An extra 10 minutes reading time in which you are NOT permitted to write)

INSTRUCTIONS TO STUDENTS

1. This paper consists for 04 pages. Please check to see that your paper is complete.
2. Printed or written material is not allowed in examination hall.
3. Answer all the questions in the answer booklet. Number your answers correctly in the answer booklet.
4. Attach all the sheets used as your answer paper in their correct sequence and secure with a string.
5. Use both sides of the answer sheet and write your candidate number on each sheet.

SECTION	PARTICULARS	TOTAL MARKS	THE ALLOCATIONS
A	Part 1: Multiple Choices Part 2: Fill in the Blanks Part 3: True and False	30	30 minutes
B	Short answers	30	60 minutes
C	Long answers	40	90 minutes
	Total	100	

SECTION –A

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

Part 1: Multiple Choices. Pick the correct answer.

(10×1.5=15 Marks)

- (1) Deposition of sand particles on the agricultural fields due to natural calamities is termed as
 - a. Sand casting.
 - b. Sand deposition.

- (2). _____ sector is more responsible for climate change in Fiji.
 - a. Agriculture
 - b. Transport

- (3) Presence of excess water in or near the root zone or standing water above the soil surface for any substantial period of time known as _____
 - a. Water logging
 - b. Ponding

- (4) ESP (Exchangeable Sodium percentage) of alkaline soil is _____
 - a. more than 15
 - b. less than 15

- (5) Irrigated rice fields are a major source of greenhouse gas _____
 - a. CH₄
 - b. CO₂

- (6) The process of deposition of soil particles carried by water is called _____
 - a. Sedimentation or siltation
 - b. Sand deposition

- (7) REDD stands for.....
 - a. Reducing Emissions from Deforestation and Forest Degradation
 - b. None of these

- (8) Scraping of the surface salts and flushing with water to wash away the excess salts is practiced in management of _____
 - a. Saline soils
 - b. Acidic soils

- (9) _____ is a process by which excess surface water is directed into the ground
 - a. Artificial recharge
 - b. Water harvesting

- (10)is the process of clearing large areas of forest across the earth and involves the cutting down, burning, and damaging of forests.
 - a. Deforestation
 - b. Afforestation

Part 2: Fill in the blanks with appropriate answers.

(5×1=5 Marks)

1. Over cutting and grazing of vegetation is a direct cause of soil/land degradation.
2. An increase in self-reliance among farmers and rural people is one of the goals of sustainable agriculture.
3. Low-input farming systems seek to minimize the use of external production inputs.
.....
4. IPM is a sustainable approach to managing pests.
5. Alkali soils are treated with chemical amendments like gypsum & sulphur for reclamation.
.....

Part 3: True or False

(10×1 =10 Marks)

- 1) In farming system, the farm is viewed in a holistic manner. (True/False)
- 2) Paddy fields are source of greenhouse gas emission. (True/False)
- 3) Groundwater recycles readily. (True/False)
- 4) Percolation is the lateral movement of water. (True/False)
- 5) Compost is concentrated organic manure. (True/False)
- 6) Use of sound crop rotations is a principle of organic farming. (True/False)
- 7) The ocean is the natural sink for groundwater flows. (True/False)
- 8) Of all of the Earth's water, only 3% is fresh water. (True/False)
- 9) Green manuring is a cheap alternative to the use of fertilizer nitrogen. (True/False)
- 10) The source of surface and ground water is rain. (True/False)

SECTION- B (Short Answers)

(6×5= 30 Marks)

Answer all the questions. Each question carries 5 marks.

- 1) Analyse objectives of farming systems in brief.
- 2) What are adverse effects of modern high- input agriculture?
- 3) What is significance of forests in maintaining ecological balance?
- 4) What are the steps to achieve sustainability in agriculture production?
- 5) What is soil degradation? What are the most common direct causes of soil degradation?
- 6) Provide characteristics of the small-scale tropical farming systems.

SECTION-C (Long answers)

(5×8=40 Marks)

Answer any five from the following questions. Each question carries 8 marks.

1. Fiji's agriculture sector has a significant role in climate change in Fiji. Provide detail information.
2. Provide an essay on overview of organic farming in Fiji.
3. What are objectives of farming system? Utilize any two in detail.
4. Define sustainable farming. Write potential benefits of sustainable farming.
5. Agrochemicals are potential source of pollution. Analyse statement in in detail.
6. What are principles of organic agriculture? How these can be achieved?
7. What are the determinants of farming systems?
8. Analyse effects of deforestation in detail.

THE END