



FIJI NATIONAL UNIVERSITY

COLLEGE OF AGRICULTURE, FISHERIES AND FORESTRY
SCHOOL OF AGRICULTURE
DEPARTMENT OF SOIL SCIENCE & AGRICULTURAL ENGINEERING.

FINAL EXAMINATION: 2017

Commercial Agriculture, year 1: Trimester- 2
AGRO ECOSYSTEM MANAGEMENT&ORGANIC FARMING
(SAC 302)

TOTAL MARKS: 100

TIME ALLOWED: 3:10 HOURS

This paper consists of six (6) pages, please check to see that your paper is complete.

Instructions

Answer all questions in the answer booklet

- Number your answers correctly in the provided answer booklet.
- Write your student ID number on all pages including additional sheets.
- Write your student ID number on question paper.
- Don't write answers on question paper; write answers only in answer booklet.

“MOBILE PHONES ARE STRICTLY PROHIBITED IN THE EXAMINATION HALL”

PART	TYPE		TOTAL MARKS
I	MULTIPLE CHOICE ANSWERS	10 x 1	10
II	TRUE OR FALSE	11 x 1	11
III	FILL IN THE BLANKS	11 x 1	11
IV	DEFINITIONS/SHORT ANSWERS	6 x 3	18
V	DESCRIPTIVE QUESTIONS	5 x 7	35
VI	ESSAY QUESTION	1 x 15	15
TOTAL MARKS			100

1. One of the major environmental issues threatening mankind today is :
 - a) Global warning,
 - b) water pollution,
 - c) pesticide regulation,
 - d) biomedical wastes
2. One Functions of forest resources is:
 - a) Productive function
 - b) Protective clothing
 - c) Regulatory system
 - d) Productive organs
3. Vermicomposting is a nutrient rich compost which:
 - a) helps better plant growth and crop yield
 - b) Improves physical structure of soil.
 - c) enriches soil with micro-organisms
 - d) all of the above
4. The nitrogen content in vermicomposting is :
 - a) 1.6%
 - b) 0.2%
 - c) 0.5%
 - d) 0.6%
5. One of the ecological importance of forest is:
 - a) Production of Oxygen
 - b) Conservation of soil
 - c) Important in a fertility of soil
 - d) All of the above

6. One of the bio – fertilizer organism is::
- a) RHIZOBIUM
 - b) AZOTOBACTER
 - c) PSB
 - d) All of the above
7. One of the ecological important of Forest is:
- a) Control of water flow
 - b) Absorption of noise
 - c) Habitats to wildlife
 - d) All of the above
8. One important of forest is:
- a) They provide raw materials for certain industry
 - b) They prevent soil erosion, and preserve the fertility of the soil
 - c) They provide moisture and the temperature
 - d) All of the above
9. One advantage of bio fertilizers is:
- a) sustain soil health
 - b) supplement chemical fertilizers
 - c) solubilize and mobilize nutrients
 - d) All of the above
10. One criteria used to judge essentiality of nutrient elements if :
- a) it is needed for the plant to complete its life cycle.
 - b) it is part of any molecule or constituent of the plant that is itself essential.
 - c) deficiency symptoms appear in the absence of the element.
 - d) All of the above

PART 11: TRUE OR FALSE

11x 1 = 11 marks

1. Farmers and agricultural workers are exposed to pesticides directly when they are mixing and spraying these pesticides. .
2. Every year, about 3 million people are poisoned around the world and 200,000 die from pesticide use.
3. Communities and Consumers are insidiously exposed to pesticides through contamination of the soil, air and water.
4. The use of plastics in medical equipment is now growing at the rate of 6% per annum.
5. Three fourth of the world's Earth's surface is covered with water.
6. All living things depends on water..
7. Environment is derived from the French word Environner, which mean encircle or surrounding.
8. The amount of precipitation and the elevation of the forest also affect forest composition.
9. Organic farming is a system which avoids or largely excludes the use of synthetic inputs.
10. Healthy soils produce healthy crops that foster the health of animals and people.
11. Organic Agriculture should sustain and enhance the health of soil, plant, animal, human and planet as one and indivisible.

PART III:

FILL IN THE BLANKS

11 x 1 = 11 marks

1. One method of Vermicomposting production is _____
2. One variety of Earthworms used for vermicomposting is _____
3. One type of essential elements is _____
4. The Environment is derived from the French word _____
5. One environment issues threatening mankind is _____
6. One type of composting method is called _____
7. _____ is a technology of composting various forms of biodegradable wastes with the help of earthworms.
8. _____ quarters of earth surface are covered with water.
9. _____ % of water on earth is salt water and leaving only 3% as fresh water
10. A _____ is a large area of land covered with trees.
11. The microorganisms that perform the composting process require _____ to survive.

PART IV: ANSWER 6 FROM THE FOLLOWING

6x3 = 18 marks

1. Explain what subsistence farming is.
2. Explain what a forest is.
3. Explain what is commercial Agriculture .
4. Explain what is a compost
5. Explain what is organic farming
6. Explain what is bio fertilizer

7. Explain what is vermicomposting
8. Explain what is farming system
9. Explain what is composting
10. Explain what is subsistence farming

PART V: ANSWER ANY 5 FROM THE FOLLOWING

5 x 7 = 35

1. Briefly explain the role of organic manure.
2. Briefly explain why organic farming not adopted on large scale
3. Briefly explain three factors impacting farming systems.
4. Briefly explain two basic steps of organic farming.
5. Briefly explain the two methods of vermicomposting
6. Briefly explain two advantages of compost.

PART VI: ANSWER ANY 1 FROM THE FOLLOWING

1x15 = 15 marks

1. Soil erosion
 - a) Explain what is soil erosion and the three mechanics of soil erosion.
 - b) Lists and explain three types of soil erosion
 - c) And explain ways to control those three types of soil erosion mention above.
- OR
2. Climate change.
 - a) Briefly explain what climate change is.
 - b) Explain why climate change is very important to understand.
 - c) And explain some of the major causes of climate change in Fiji.

END OF THE PAPER