



COLLEGE OF AGRICULTURE, FISHERIES & FORESTRY
SCHOOL OF AGRICULTURAL SCIENCES

DEPARTMENT OF AGRICULTURAL ECONOMIC AND EXTENSION EDUCATION
FINAL EXAMINATION
TRIMESTER 3, 2016

CERTIFICATE III IN COMMERCIAL AGRICULTURE

AEG 301: WATER & ENERGY

Time Allowed : 3 hours plus (10 minutes reading time)

Instructions

1. You are allowed 10 minutes Extra reading time during which you are NOT to write.
2. Begin each Section on a fresh page and use both sides of the sheet.
3. Do not write your name on any answer sheet - only write your Id number in all Answer sheet.
4. Insert all written sheets, graph paper, drawing paper, etc. in their correct sequence
And secure with string.
5. For all sheets of paper of which rough/draft work has been done, cross it through
And you **MUST ATTACH** to your answer scripts.
6. Write clearly the number(s) of the question(s) attempted on the top of each sheet.
7. Non-programmable calculators are permitted
8. **TOTAL MARKS = 100**

SECTION	DESCRIPTION	Marks
SECTION A	Part I – Fill the Blanks	10
	Part II – True or False	10
	Part III– Matching	10
	All question in this section are Compulsory	
SECTION B	Short Answer All question in this section are Compulsory	50
SECTION C	Long Answer and Essay Question Answer any TWO question from this section	20
	TOTAL	100

SECTION A

7. A biofuel is any liquid fuel derived from biological material such as trees, agricultural wastes, crops, or grass.
8. Drip irrigation system is suitable of growing rice crops.
9. Photosynthesis is the process used by plants and other organisms to convert light energy, normally from the sun, into chemical energy.
10. Surface water that is on the earth surface, such as in a stream, river. Lake or reservoir.

PART III

MATCHING

(10MARKS)

Match Column A with the corresponding correct answer from Column B and write the answer in the answer booklet provided

Column A	Column B
1.Surface irrigation	A) The water found underground in the cracks and spaces in soil, sand and rock
2.Sprinkler irrigation	B) The method which water is supplied to plants at regular intervals for agriculture. It is used to assist in the growing of agricultural crops
3.Weir	C) Solar energy, wind energy,
4.Irrigation	D) the group of application techniques where water is applied and distributed over the soil surface by gravity
5.Agricultural crops	E) irrigation that saves water and fertilizer by allowing water to drip slowly to the roots of many different plants, either onto the soil surface or directly onto the root zone
6. Aquatic Crops	F) In its simplest form, a weir consists of a wall of timber, metal or concrete with an opening with fixed dimensions cut in its edge. The opening, called a notch, may be rectangular, trapezoidal or triangular
7.Photosynthesis	G) Include cornstarch, corn oil and other vegetable oils. They generally yield sugars, oils, and extracts. Soybeans and sunflowers seeds are used to produce oil, which can be used to make fuels. These plants are also called oil-plants
8.Renewable Energy	H) A wide variety of aquatic biomass such as algae, giant kelp, other seaweed, and marine micro flora. They can be used for bioenergy generation
9.Ground water	I) A wide variety of aquatic biomass such as algae, giant kelp, other seaweed, and marine micro flora. They can be used for bioenergy generation
10.Drip irrigation	J) the process used by plants and other organisms to convert light energy, normally from the sun, into chemical energy

SECTION C

LONG ANSWER AND ESSAY QUESTION

(20marks)

Answer any **TWO** questions from this section

Each Question in this section worth 10 marks

1. Explain using diagram what happen to water when applied
Clay soil
Sandy soil
Loam soil
2. Explain how does biogas digester work with a help of a diagram?
3. With a help of a neat diagram discuss the water cycle process?

THE END

EQP RECEIPT CHECKLIST FORM

Particulars		Details/Comments (To be filled by Unit Lecturer)	Tick if present on EQP (To be filled by exams staff)
Cover Page			
Fiji National University with Logo		✓	
College		✓	
School		✓	
Program		✓	
Unit Code		✓	
Unit Name		✓	
Examination Period		✓	
Duration of Examination		✓	
Instructions		✓	
Total Number of Pages		✓	
Other Pages			
Footer	Page Number	✓	
	Unit Code	✓	
	Examination Period	✓	
Last Page			
The End		✓	
Overall			
Proper Print		OK	
Examination Requirements (FNU/E-1)		✓	
Moderator's Report (FNU/E-3)		✓	
ERRS (Class List)		✓	
Unit Coordinator/Principal Lecturer's Name		Alvin - 191	

DISPATCHED BY (SCHOOL REP)

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