



**FIJI NATIONAL UNIVERSITY**  
**College of Agriculture, Fisheries & Forestry**  
**School of Agriculture Sciences**  
**Department of Agricultural Economics and Extension Education**  
**Trimester III Final Examination - 2016**  
**AEC402 Introductory Agricultural Economics**

**Time Allowed: 3.00 hours plus (10 minutes reading time) Total Marks: 100**

**INSTRUCTIONS:**

- 1. This paper consists of 6 pages and 43 questions.**
- 2. Please check to see that all your paper is complete.**
- 3. Answer Part I and Part II and Part III in the Answer Booklet provided.**
- 4. No written or printed material and mobile phones are allowed in the examination hall.**
- 5. Marks allocated for each question appears at the end of each question so allocate your time accordingly.**
  
- 6. This paper is divided into Three Parts. Part I contains four sections – A, B, C and D. All questions of this part are compulsory. Part II contains Short Answer questions. Attempt ALL questions Part III contains five (5) long answer questions. Attempt only four (4) out of five (5) questions in Part III**

**PART I Mix of Objective and Subjective Questions (40 Marks)**

**To be answered ONLY in the Answer Booklet provided.**

**Section A: Multiple choice Questions. (10 Marks)**

**Section B: Matching type. (10 Marks)**

**Section C: True or False. (10 Marks)**

**Section D: Demand/ supply curves (10 Marks)**

**PART II Mix of Objective and Subjective Short Answer Questions. (20 Marks)**

**PART Five (5) DESCRIPTIVE TYPE QUESTIONS Attempt Only four (4) (40 marks)**

**TOTAL OF THIS PAPER (100 Marks)**

**PART I Objective Questions (40 Marks)**

**Section A: Multiple Choice Questions. (10 Marks)**

**To be answered in the Answer Booklet provided**

- 1 In the year 2000 subsistence contribution to Agriculture's GDP was approximately:
  - a. 30-40% of agricultural GDP
  - b. 40-50% of agricultural GDP
  - c. 50-60% of agricultural GDP
  - d. 70-80% of agricultural GDP
  
- 2 A mixed economic system is also known as a :
  - a. viable economy
  - b. dual economy
  - c. flexi economy
  - d. di-mono economy
  
- 3 Within the Pacific Islands, the Human Development Index rating 2014 rated Fiji as:
  - a. first
  - b. second
  - c. third
  - d. fourth
  
- 4 An increase in supply occurs for a commodity when there is:
  - a. Disease outbreak attacking that particular commodity all other factors held constant.
  - b. Decrease in price for that particular commodity all other factors held constant.
  - c. decrease in cost of production for that particular commodity all other factors held constant
  - d. Decrease in advertising for that particular commodity all other factors held constant.
  
- 5 A grant is a sum of money that is given by:
  - a. government and does not have to be paid back
  - b. Government and has to be paid back.
  - c. government may or may not be paid back
  - b. none of the above.
  
- 6 The marginality concept can be illustrated as the change occurring in total output as a result of an addition of:
  - a. total input.
  - b. a unit of input
  - c. an addition of input cost
  - d. an addition of return on output.

- 7 A market with one seller and many buyers is classified as a:
- Monopoly
  - Monopsony
  - Monopolistic competition
  - Perfect competition
- 8 A market with many buyers and many sellers is classified as a:
- Monopoly
  - Monopsony
  - Monopolistic competition
  - Oligopoly
- 9 The equilibrium price is also known as the market:
- equilising price.
  - stable price
  - effective price
  - clearing price
- 10 Price Ceiling is an example of:
- market control
  - price control
  - supply control
  - demand control

(10 Marks)

**Section B:** Write True or False against the question number in the answer booklet provided.

- 11 Market demand is aggregate demand.
- 12 Advertising results in an extension of demand.
- 13 Price elasticity of demand is always negative.
- 14 Price Floor can be higher than the market equilibrium price arrived at by the invisible hand.
- 15 Population is a determinant of supply.
- 16 Two goods are supplementary if they give the same amount of satisfaction to the consumer regardless of which one is being consumed
- 17 All consumption systems follow the law of diminishing returns
- 18 Differentiation occurs in perfect competition.
- 19 Monopolistic competition and perfect competition are very similar.

20 Products are competitive if the performance of one does not affect the performance of the other.

(10 Marks)

Section C: Matching type. Match the words/phrases in Column A with word/phrases in Column B. Answer in the Answer Booklet provided. ONLY MATCH THE ROMAN NUMERAL WITH THE APPROPRIATE LETTER AND WRITE AGAINST THE QUESTION NUMBER.

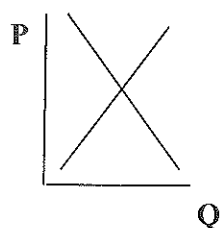
|    | Column A                 |   | Column B   |
|----|--------------------------|---|--|
| 21 | Marginal product         | A | Based on assumptions                                     |
| 22 | Positive economics       | B | Downward sloping   |
| 23 | Opportunity cost         | C | Product differentiation                                  |
| 24 | Elasticity               | D | Based on facts   |
| 25 | Demand curve             | E | Responsiveness of quantity demanded in relation to price |
| 26 | Complementary            | F | Demand decreases for inferior goods as income increases  |
| 27 | Monopolistic competition | G | Yield times price  |
| 28 | Income effect            | H | Change in product divided by change in input             |
| 29 | Normative economics      | I | Income forgone from next best alternative                |
| 30 | Total revenue            | J | One good combines well with another                      |

(10 Marks)

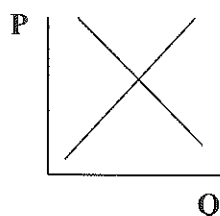
Section D. This section is worth ten (10) marks and consists of 5 graphs. Draw the graphs onto your answer booklet and show the movement/shift of the demand/ supply curves. Questions due to the situations are stated below the graphs

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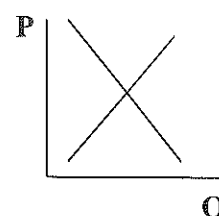
a. Bread



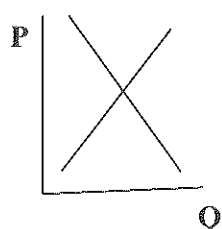
b. Fish



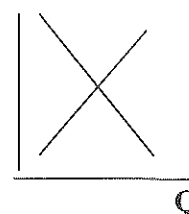
c. Cabbage



d. Goats



e. Watermelon



Situations:

- a. Price of bread increases all other factors held constant.
- b. Subsidy removed from fishing all other factors held constant.
- c. Increase in tax for cabbage all other factors held constant.
- d. Incidence of disease in goats decreases all other factors held constant.
- e. Increase in population eating watermelon all other factors held constant.

(10 Marks)

**II Mix of Objective and Subjective Short Answer Questions. This section is worth twenty (20) questions. Questions are not of equal value. Answer in the answer booklet provided.**

- 32 What is the decision rule for single input use? (3 marks)
  - 33 What causes a movement of the supply curve and a shift of the supply curve? (2 marks)
  - 34 When does a shortage occur? (3 marks)
  - 35 With the help of an example differentiate between Veblen goods and Giffen goods. (3 marks)
  - 36 What type of market structure does the market equilibrium work in (3 marks)
  - 37 Give an example of a WTO policy that affects trading of Fiji agricultural products (3 marks)
  - 38 List three supply determinants. (3 marks)
- (20 Marks)**

**III DESCRIPTIVE TYPE QUESTIONS (40 marks)**

There are five (5) descriptive type questions provided, please attempt **ONLY four(4)** out of five (5) questions only and write on the Answer Booklet provided. Answer every question on a new page to facilitate evaluation.

39. Discuss why agricultural economics is important in agriculture. (10 Marks)
40. When the price of a good increase from \$20 to \$40 the demand for the same good decreases from 120kg to 10 kg. (10 Marks)
- Calculate price elasticity of demand.
  - What type of elasticity is 'a'. Above?
41. Compare and contrast two types of economies (10 Marks)
42. With the help of real examples compare and contrast the market structures existing in the agriculture sector (10 Marks)
43. Complete the table and derive : (10 Marks)
- level of input where profit is maximized
  - level of input where production is maximized
  - average, marginal and total production curves and plot them on a graph

| Input Kg | Total Cost \$ | Extra cost \$ | Total production kg | Extra production kg | Average Production kg | Total returns \$ | Extra returns \$ |
|----------|---------------|---------------|---------------------|---------------------|-----------------------|------------------|------------------|
| 0        |               |               | 30                  |                     |                       |                  |                  |
| 1        |               |               | 80                  |                     |                       |                  |                  |
| 2        |               |               | 120                 |                     |                       |                  |                  |
| 3        |               |               | 155                 |                     |                       |                  |                  |
| 4        |               |               | 160                 |                     |                       |                  |                  |
| 5        |               |               | 150                 |                     |                       |                  |                  |

Input costs \$15/kg and output is sold at \$0.50/kg

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(10 Marks)

**THE END**

## FORMULAE

### PROBABILITY

$A \cup B = A \text{ or } B$ .       $A \cap B = A \text{ and } B$  (overlap).

$P(B | A)$  = probability of  $B$ , given  $A$ .

#### Rules of Addition

If  $A$  and  $B$  are mutually exclusive:  $P(A \cup B) = P(A) + P(B)$

If  $A$  and  $B$  are **not** mutually exclusive:  $P(A \cup B) = P(A) + P(B) - P(A \cap B)$

#### Rules of Multiplication

If  $A$  and  $B$  are independent:  $P(A \cap B) = P(A) * P(B)$

If  $A$  and  $B$  are **not** independent:  $P(A \cap B) = P(A) * P(B | A)$

$E(X) = \sum (\text{probability} * \text{payoff})$

### DESCRIPTIVE STATISTICS

Arithmetic Mean

$$\bar{x} = \frac{\sum x}{n} \quad \bar{x} = \frac{\sum fx}{\sum f} \quad (\text{frequency distribution})$$

Standard Deviation

$$SD = \sqrt{\frac{\sum (x - \bar{x})^2}{n}} \quad SD = \sqrt{\frac{\sum fx^2}{\sum f} - \bar{x}^2} \quad (\text{frequency distribution})$$

### INDEX NUMBERS

Price relative =  $100 * P_1/P_0$

Quantity relative =  $100 * Q_1/Q_0$

Price: 
$$\frac{\sum w * \left(\frac{P_1}{P_0}\right)}{\sum w} * 100$$

Quantity: 
$$\frac{\sum w * \left(\frac{Q_1}{Q_0}\right)}{\sum w} * 100$$

### TIME SERIES

Additive Model

Series = Trend + Seasonal + Random

Multiplicative Model

Series = Trend \* Seasonal \* Random