

#E13

SIR ARTHUR LEWIS COMMUNITY COLLEGE

DIVISION OF AGRICULTURE

COURSE: ECO101 FUNDAMENTALS OF ECONOMICS

SEMESTER II EXAMINATION 2013

INSTRUCTIONS: ANSWER ANY FIVE (5) QUESTIONS

TIME: 2.5 HRS

1. The objective of the consumer is maximization of utility subject to a budget.
 - (a) Define the term "utility" 2 mks
 - (b) What is an indifference curve? 2 mks
 - (c) Explain the utility maximizing behavior of a consumer who is choosing between products, A and B 5 mks
 - (d) Represent a total utility curve on an appropriately labeled diagram 5 mks
 - (e) Gasoline was sold for \$3.00 per litre last year January, but this January it was \$4.00 per litre. Consumers have bought more gasoline this year than they did last year January. This is clear proof that the economic theory that people buy less when price rises is incorrect. Do you agree? Justify your answer. 5mks

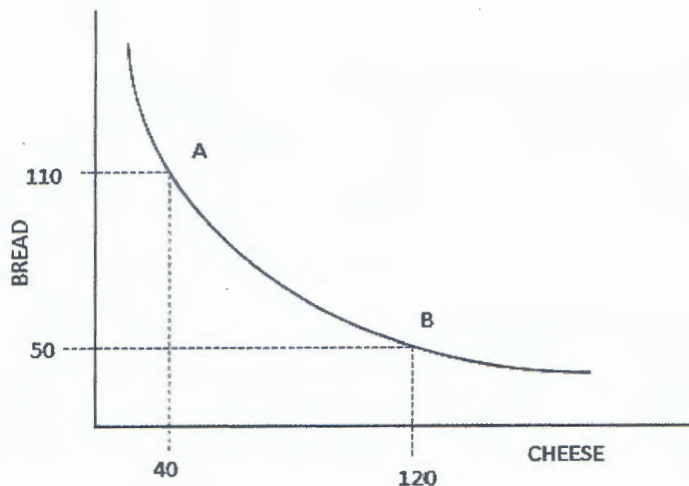
2. The following is an estimated demand function of Yale Island for chicken:
$$Q_d = 100 - 1.5P_c + 2P_b + 0.47Y - 0.05P_f$$
where P_c = price of chicken, P_b = price of beef, P_f = price of fries, Y is disposable income and Q_d is the quantity of chicken in kilogrammes.
 - (a) Using the information in the demand function, explain the statement "chicken and fries are complements" 3mks
 - (b) Assume that the price of fries falls by 2 unit, how does this impact the quantity demanded of chicken? 3mks
 - (c) Given that $P_c = \$4.00$, $P_b = \$5.00$ and $Y = \$1000.00$, $P_f = \$1.5$ estimate the quantity of chicken that is demanded. 5mks
 - (d) Graphically distinguish between a change in quantity demanded of chicken and a change in the demand for chicken. 5mks
 - (e) Write TWO factual statements about the relationship between the price of chicken and the quantity demanded of chicken. 4mks

3 Suppose that the supply and demand curves of product X are

$$Q_d = 20 - P \quad \text{and} \quad Q_s = P - 4.$$

- (a) Define the term demand. 2mks
- (b) On separate sketches show: (i) demand curve (ii) supply curve. 6mks
- (c) Determine equilibrium price and quantity. 4mks
- (d) Write a factual statement about Q_s and Q_d if price were to change to \$14.00. 2mks
- (e) List three factors other than price that can affect the supply of product X. 3mks
- (f) Represent a shift in supply on a graph. 3mks

4 (a) Robin's preferences for cheese and bread are shown in the figure below.



- (i) Name the curve in the figure above 2mk
- (ii) Calculate the MRS between points A and B and interpret this measure. 4mks
- (iii) Which of the two points A and B provides more satisfaction? Why? 4mks
- (b) Assume that Robin spends his budget buying just two goods, bread and cheese. State the equilibrium condition for Robin. 2 mks
- (c) Suppose Robin has an income of \$30.00. He derives satisfaction from consuming tea and biscuits. The price of tea is \$3.00 per cup and biscuits are priced at \$0.50/unit.
- (i) Graphically represent the budget line for this situation. Label the axes appropriately. 4 mks

- (ii) Suppose that the price of tea decreases to \$2.00 per cup and Robin's income and the price of biscuits remain constant, redraw the budget line to reflect this situation. 4 mks

5. The following is a production function for a small enterprise. Use it to answer the questions which follow.

Variable input	1	2	3	4	5	6
Output (kgs)	18	32	42	50	48	42

- (a) Plot the total product curve 6 mks
- (b) Show on the curve, the section representing: (i) increasing marginal returns (ii) decreasing marginal returns (iii) negative marginal returns. 6mks
- (c) Calculate the marginal output and average output at 4 units of the variable input. 4 mks
- (d) What level of input use is most profitable to the owner? 4mks
6. (a) Define the term "gross domestic product" 2 mks
- (b) Explain the three methods of measuring national income 6mks
- (c) Suppose that consumption expenditures are \$30 million, gross private investment is \$15million, net property income from abroad \$15 million, and government purchases \$ 20 million. If GDP is \$70 million, what is the value of net exports? 5 mks
- (d) Define the term fiscal policy 2 mks
- (e) Give two examples of fiscal policy 2 mks
- (f) Show government uses any one of the two policies mentioned in (e) above to cause the economy to grow. 3mks

