**JOMO KENYATTA UNIVERSITY**

**OF**

**AGRICULTURE AND TECHNOLOGY**

**UNIVERSITY EXAMINATION 2017/2018**

**FIRST YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE OF**

**BACHELOR OF SCIENCE IN ACTUARIAL SCIENCE,**

**BACHELOR OF SCIENCE IN FINANCIAL ENGINEERING & BACHELOR OF**

 **SCIENCE IN STATISTICS**

**STA 2103: BUSSINESS ECONOMICS I**

**DATE: JANUARY 2018 TIME: 2 HOURS**

**INSTRUCTIONS TO CANDIDATES:**

1. *Answer questions ONE(section A) and any two questions in section B*
2. *Be neat and show all your workings*
3. *All questions except question one carry equal marks*

**SECTION A**

**QUESTION ONE**

1. Answer the next question(s) on the basis of the given supply and demand data for wheat:

**Bushels demanded price per Bushels supplied**

**Per month bushel per month**

45 $5 77

50 4 73

56 3 68

61 2 61

67 1 57

1. Referring to the above data, identify the equilibrium price? Explain. **(2 marks)**
2. Explain what would happen if the price in this market was $4. **(2 marks)**
3. What would happen if the price was initially $4 and free to fluctuate. **(2 marks)**
4. Suppose the demand for item X is represented by the equation Q=80-0.5P,where Q is the quantity demanded and P is price; calculate
5. Quantity demanded of X when price is 10 and 20 **(2marks)**
6. Elasticity of demand when P=10 **(2 marks)**

c) Using relevant diagrams, explain elasticity measurement techniques. **(5 marks)**

d) Describe the features of monopolistic competition. **(5 marks)**

e) Explain five basic determinants of market demand that could cause demand to decrease.

 **(10 marks)**

**SECTION B**

**QUESTION TWO**

1. A perfectly competitive firm is faced with the following total cost schedule

Q=0 1 2 3 4 5 6 7 8 9 10

 TC=9 20 30 39 47 54 60 67 77 90 109

Required:

1. If the market price is $ 13, what output will the firm choose to produce to maximize profit? What is the maximum profit? **(4 marks)**
2. Suppose the market price falls to $6, how much will the firm choose to produce?

 **(3 marks)**

1. If the firm chooses to produce the output in ii) above, what will be its profit? **(4 marks)**
2. Explain the conditions for the successful application of price discrimination in a monopoly market. **(4 marks)**
3. Describe the sources of economies of scale. **(4 marks)**

**QUESTION THREE**

1. Explain the law of variable proportions as used it production theory. **(5 marks)**
2. Consider a market who has the following demand function P=140-4Q. In addition suppose his total cost function is given by TC=10+5Q2
3. Find the equilibrium price (P) and quantity (Q). **(5 marks)**
4. What is the maximum profit? **(5 marks)**
5. Explain the relationship between marginal cost and marginal product. Give a graphical illustration. **(5 marks)**

**QUESTION FOUR**

1. Explain the assumptions of Cardinal utility theory in consumer behavior and utility maximization.

 **(5 marks)**

1. Using diagrams, describe the following concepts as used in utility analysis
2. Price consumption curve **(5 marks)**
3. Income consumption curve **(5 marks)**
4. Describe the expansion of the law of demand**. (5 marks)**