KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2016/2017

FIRST SEMESTER EXAMINATION FOR THE DEGREE OF

MASTER OF ECONOMICS

EET 802: ADVANCED MICROECONOMIC THEORY II

DATE: Tuesday, 29th November 2016 **TIME:** 2.00 p.m. - 5.00 p.m.

INSTRUCTIONS:

Answer all the four questions.

1. A perfectly competitive industry has an aggregate market demand function given below:

$$2400 = 10D(P) + 1200P$$

All firms in the industry have a cost function given as

$$q^3 - 6q^2 + 10q - 3c(q) = 0$$

(i) Find the equilibrium price and aggregate output if the industry has a total of 10 active firms.

(ii) What effect will a quantity tax of sh. 3 per unit have on the equilibrium industry output and number of active firms?

2. A consumer's utility function is given as

$$ln\ u(x, y) = 0.5\ ln\ x + 0.5\ ln\ y.$$

Assume the consumer's income is Sh. 1000 and the price of y is fixed at sh. 1. If the price of x falls from Sh. 12 to Sh. 10 show that the Equivalent Variation (EV) is greater than the change in consumer surplus (ΔCS) which in turn is greater than the Compensating Variation (CV).

3. Write short notes on each of the following.

(i) Relationship between the Marginal Revenue and the elasticity of demand for a profit-maximising monopolist.

(ii) Market Power as a cause of market failure.

(iii) The coefficient of relative risk aversion.

(iv) Relationship between expected utility and variance.

4. A monopolist is operating in two markets whose demand functions are given below.

$$10q_1 = 360 - 2P_1$$

$$q_2 = -0.4P_2 + 16$$

The monopolist's marginal cost is 50 (fixed).

(i) Assuming that the monopolist can keep the two markets separated, explain why the monopolist will find it profitable to price discriminate.

(ii) Show that the monopolist's profit level will be higher under price discrimination than when the monopolist charges a uniform price in the two markets.