



# **MURANG'A UNIVERSITY OF TECHNOLOGY**

## **SCHOOL OF BUSINESS AND ECONOMICS**

**DEPARTMENT OF COMMERCE**

**UNIVERSITY POSTGRADUATE EXAMINATION**

**2020/2021 ACADEMIC YEAR**

**FIRST YEAR SECOND SEMESTER EXAMINATION FOR MASTER OF  
SCIENCE IN BUSINESS ADMINISTRATION**

**BCE 613– MANAGERIAL ECONOMICS**

**DURATION: 3 HOURS**

**Instructions to candidates:**

1. Answer Any Four questions.
2. Mobile phones are not allowed in the examination room.
3. You are not allowed to write on this examination question paper.

### QUESTION ONE (25 MARKS)

- a) After Iraq's oil supply was disrupted in the second gulf war, the price of jet fuel used by airlines increased dramatically. As the CEO of KQ you have been presented with the following options to deal with the problem.
1. Raise air fares to reflect the expense reduction.
  2. Decrease the number of flights per day in the in some markets.
  3. Enter into forward contracts to buy jet fuel at fixed price for the next two years and set the prices to the level that will cover costs of being hedged.

Evaluate these options in the context of decision making model.

- b) Demand elasticity for motorbikes in Kenya is estimated as

$$Q=2000 + 15y - 5.5p$$

Where y is the income in thousands q is the quantity of units demanded and P is the price per unit.

p = 150, y = 15000 determine the following

- 1) price elasticity of demand (1mark)
  - 2) income elasticity of demand (1mark)
- c) If the US dollar were to depreciate by 2024, what would be the effects on exports and domestic sales of a us manufacturer. Explain (5marks)

### QUESTION TWO (25 MARKS)

A firm uses two variables labor (L) and raw materials (M), in the production of output. at the current output levels

	Unit cost(Kshs)	Marginal product(units)
Labor	10	25
Raw materials	2	4

- a) Determine whether firm is operating efficiently given its output and cost minimizing objective. (13marks)

- b) Determine the changes of any in the relative proportion of labor and raw materials would be required for efficient operations. (10marks)

### **QUESTION THREE (25 MARKS)**

Universities in Kenya are currently experiencing increased student's enrolment putting them in progressively tighter financial dilemma that requires reexamination of pricing schemes in the institutions of higher learning. A full cost Proposal has been proposed by the vice chancellors, combined with government provision of loans to students who would otherwise not have access to education. One proposed the advocates of the proposal are informed that private returns to education will motivate students to pursue higher education. Others argue that there exists a significant external benefits for undergraduate to warrant the high level government support. Advocates of the cost pricing argue for a standard fee higher than the present one for all students. Standard fee proposed ignore the relative difference for different activities in different universities.

- a) Discuss several possible rationale for charging different prices for different courses of study. (8marks)
- b) What are the distribution effects of pricing scheme that charges the same fee for all students? (7marks)
- c) Would you complain a lot if large sections of the lectures are taught by graduate students if these were priced significantly lower than the small seminar taught by outstanding scholars? (5marks)
- d) What problems would you encounter where universities adapt their kind of pricing system? (5marks)

### **QUESTION FOUR (25 MARKS)**

Consider the following static game in which two brewers EABL and Keroche industries chose to compete either through advertising (A), research and development (RD) or export (E). The game is played once only and the possible players are shown in the table below.

Keroche industries				
	A	R&D	E	
EABL	A	0,1	9,0	4, 3
	R&D	5,9	7,3	1,7
	E	7,5	6,9	3,5

- i) identify any pure Nash equilibrium (15marks)
- ii) explain the likely solution of their game (10marks)

**QUESTION FIVE (25 MARKS)**

Murang’a Unique co-creators hold a monopoly in the production of ball bearing in Kenya. The cost function facing unique is estimated as

$$TC = 100,000 - 20Q$$

- a) What is the marginal cost of unique? (7marks)
- b) If the price elasticity of unique is -1.5. What price should unique charge? (7marks)
- c) What is the marginal revenue at the price in part II above? (7marks)
- d) If a competitor develops a substitute for the bell bearings and price elasticity whereby to -30, what price should unique charge? (5marks)