

**FIRST SEM 2019/2020**



**UNIVERSITY OF ESWATINI  
FINAL EXAMINATION EXAM PAPER**

**PROGRAMME: BSc in Agricultural Economics and Management**

**COURSE CODE: AEM 201**

**TITLE OF PAPER: INTERMEDIATE MICROECONOMICS**

**TIME ALLOWED: 2.00 HOURS**

**INSTRUCTION : ANSWER ALL QUESTIONS**

**DO NOT OPEN THIS PAPER UNTIL PERMISSION HAS BEEN GRANTED BY THE  
CHIEF INVIGILATOR**

**Question 1 [25 Points]**

1. a) List and explain three properties of Indifference curve map . [ 6 points ]
- b) Given the following utility functions; Find their properties [ 10 points ]
  - $U = Ax^{\alpha}y^{\beta}$
  - $U = Ax + By$
- c) Given the consumption of good  $c_1$  with prob.  $\pi_1$  and  $c_2$  with prob.  $\pi_2$  ( $\pi_1 + \pi_2 = 1$ ) in Preferences under Uncertainty. Find the slope on an Indifference Curve? [ 8 points ]

**Question 2 [25 Points]**

- a) A consumer Purchase two goods X and Y where the utility function is represented by  $U= XY$  and budget is represented by  $P_x X+p_y Y = M$ . Find the most preferred affordable bundle for this consumer. [ 8 points ]
- b) What is Slutsky effect in consumer theory? Explain in details. [ 5 points ]
- c) Given  $U=XY$  , Suppose the  $M=72$  and the initial  $p_{x1} = 9$  then decrease to  $p_{x2} = 4$  ,  $p_y = 1$  Find the optimal consumption before and after price decrease. [ 8 Points ]

**Question 3 [25 POINTS]**

- a) Give four examples of market interactions with externalities: two positive and two negative ones. [ 8 points ]
- b) In each of your examples is the outcome Pareto efficient or not? Why or why not ? (You can answer this question assuming that market is not regulated) [ 8 points ]
- c) In each case explain how possibly we could change incentives of the agents so that they are closer to socially optimal outcome? [ 9 points ]

**Question 4 [25 POINTS]**

Suppose the short-run production function of a maize farmer is  $y = x_1^{1/3} \tilde{x}_2^{1/3}$ . and the product price per ton is  $P$ ,  $W_1$  is price of input  $X_1$  and  $W_2$  is the price of fixed input  $X_2$ .

- a) Find the Marginal product of  $X_1$  input? [ 5 Points ]
- b) Find the farmer's short-run demand for input 1 when the level of input 2 is fixed at  $\tilde{x}_2$  units? [ 10 Points ]
- c) Find the short run supply of the farmer and explain Comparative Statics of Short-Run Profit-Maximization? [ 10 Points ]