UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

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PROGRAMME: BSc. in Agricultural Economics and Agribusiness Management

COURSE CODE: AEM 405

TITLE OF PAPER: PRODUCTION ECONOMICS

TIME ALLOWED: TWO HOURS

INSTRUCTION: 1.   ANSWER ALL QUESTIONS
            2.   EACH QUESTION CARRIES TWENTY FIVE (25)
                   MARKS

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Question One

(a) Briefly explain the main features of first and second stages of a classical production function **4 MARKS**

(b) Explain what you understand by elasticity of production and diminishing returns. **3 MARKS**

(c) For a classical production function, verify the relationship between MC and MPP; AVC and APP. **8 MARKS**

(d) Explain why costs are only computed and graphed in stage I and stage II of the classical production function. **7 MARKS**

(e) Differentiate between marginal cost and marginal factor cost **3 MARKS**

Question Two

(a) You are planning to commercially grow tomatoes and baby cabbages on two separate farms and your only variable input is fertilizer. Explain how you would allocate the fertilizer between the two farms when you have unlimited financial capital and when you do not have enough financial capital to purchase everything you wanted for the business. **15 MARKS**

(b) Assume your cost function is: $TC = 100 + 6Y - 0.36Y^2 + 0.02Y^3$. Assume also that you are operating in a perfectly competitive market where the price of Y is E6.0. How much quantity would you produce and sell in the market. Justify your answer. **10 MARKS**

Question Three

(a) Consider the following as your production function in the production of maize: $Y = 6X^2$, where Y is output of maize in tons and X is variable input. If the fixed cost is E100 and the price of the variable input is E36, derive the total variable cost, marginal and average cost functions when 100 tons of maize are produced. **12 MARKS**

(b) While economic ends and choice indicators may differ, the principles of production economics are always the same. Comment with respect to the definition of economic efficiency. **13 MARKS**

Question Four

(a) Write short notes of the following types of enterprises:

(i)   Complementary   **3 MARKS**
(ii)   Supplementary   **3 MARKS**
(iii)   Competitive   **3 MARKS**
(iv)   Joint   **3 MARKS**

(b) With help of relevant diagrams, explain how a farmer may make use of the intermediate products grown on the farm to produce a final product for the market. **13 MARKS**