## NATIONAL UNIVERSITY OF LESOTHO <br> FACULTY OF AGRICULTURE <br> BSC AGRICULTURE EXAMINATIONS

## AEC 317 PRODUCTION ECONOMICS FOR AGRICULTURE

MARKS: 50
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## QUESTION 1

In the factor -factor relationship, two inputs are used in the production process as follows:

| Combination | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Input $\mathrm{x}_{1}$ | 30 | 24 | 180 | 10 | 7 | 3 | 1 | 0 |
| Input $\mathrm{x}_{2}$ | 0 | 1 | 3 | 4 | 8 | 11 | 14 | 20 |

a. Draw the isoquant curve
(5)
b. Draw the Isocost lines if;
I. the price of $X_{2}$ is M5.40 and the price of $X_{1}$ is $M 7.00$;
(5)
II. the price of $X_{2}$ is $M 0,85$ and the price of $X_{1}$ is $M 0.35$
III. the price of $X_{2}$ is $M 1,66$ and the price of $X_{1}$ is $M 0.50$
(5)
c. which combination meets the least cost criterion

In the production process two or more products using a variable input. Explain and give examples of

## QUESTION 2

a. Differentiate between fixed costs and variable costs in the production process?
b. When you are presented with the following cost schedules in the production of tomato

| Quantity | Total Fixed costs | Total variable costs |
| :---: | :---: | :---: |
| 0 | 70 | 0 |
| 1 | 70 | 30 |
| 2 | 70 | 40 |
| 3 | 70 | 45 |
| 4 | 70 | 55 |
| 5 | 70 | 75 |
| 6 | 70 | 120 |

Calculate the total costs, Marginal Costs, Average Total Costs and Average Fixed Costs
c. Draw the different curves

