MASENO UNIVERSITY

UNIVERSITY EXAMINATIONS 2013/2014

SECOND YEAR SECOND SEMESTER EXAMINATIONS FOR THE DEGREE OF BACHELOR OF SCIENCE IN AGRIBUSINESS MANAGEMENT/ANIMAL SCIENCE WITH INFORMATION TECHNOLOGY

(MAIN CAMPUS

AEG 204: PRODUCTION ECONOMICS

Date: *8th April, 2014* ***Time:*** *2.45 – 5.00pm*

INSTRUCTIONS:

- Answer ALL questions.
- Marks for each question are indicated in brackets against.
- Carefully read and follow the instructions contained in the answer booklet(s) you have been provided with.

1. Carefully **READ AND FOLLOW THE INSTRUCTIONS** contained in the answer booklet(s) you have been provided with.
2. Answer **ALL** thequestions.
3. Marks for each question are indicated in brackets against

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1. a) Discuss land as a production resource managers have to deal with wisely under the following subheading

i) Quality (3 mks)

ii) Quantity (3 mks)

iii) Topography (3 mks)

iv) Location (3 mks)

b) Briefly discuss the main assumption made in production function studies. (6mks)

c) Explain the law of diminishing returns (2 mks)

2. Using the production function below:

$$Y = 8x + 6x^2 - 0.2x^4$$

I) Find APP, MPP &EP equation (6 mks)

II) Evaluate APP, MPP when X=3 (4 mks)

III) At what level of X does stage II begin and end (4 mks)

3. a) The following table presents fixed and variable cost in relation to output

Output (Y)	Variable cost (VC)	Fixed cost (FC)
0	0	50
40	50	50
100	100	50
150	150	50
200	200	50
250	250	50

Calculate;

i) Marginal cost (MC) (2mks)

ii) Average variable cost (AVC) (2mks)

iii) Average Fixed cost (2mks)

iv) Total cost (2mks)

b. With the help of the production function

$Y=100-3X_1^2+4X_1+2X_1X_2-5X_2^2+48X_2$

Find the value of X_1 and X_2 at which TPPis at maximum (10mks)

4. Agricultural production is faced with a lot of risks and uncertainties, discuss ways of mitigating risk and uncertainties in agricultural production (18 mks)