

**W1-2-60-1-6**

## JOMO KENYATTA UNIVERSITY

**OF**

**AGRICULTURE AND TECHNOLOGY**

# University Examinations 2014/2015

**THIRD YEAR SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF COMMERCE**

**HCOB 2505 : PRODUCTION ECONOMICS**

**DATE: AUGUST 2015 TIME: 2 HOURS**

**INSTRUCTIONS: ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER**

**TWO QUESTIONS.**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**QUESTION ONE (30 MARKS)**

**READ THE FOLLOWING AND ANSWER THE QUESTIONS THAT FOLLOW:**

Production has four time periods – the production manager of Uwezo Manufacturers stated during a presentation. These were the very short run, short run, long run and very long run. He said that the law of variable proportions is only applicable in the short run and the law of returns to scale will operate in the long run period. He asked the audience whether they understood the meaning of production and whether production creates utility.

He said that production is the process of transforming resources into careful forms thereby creating utility. As factors are being employed production undergoes various stages. A producer needs to make decisions.

**Required:**

(a) Discuss the factors of production. [5 marks]

(b) Highlight the laws of returns to scale. [6 marks]

(c) State the stages of production and show which one is the most rational.

[3 marks]

(d) Explain decision making environments. [6 marks]

(e) State the Cobb Douglas production function and explain its components.

[5 marks]

(f) Highlight the risk altitudes of a producer. [5 marks]

**QUESTION TWO (20 MARKS)**

(a) PQR Ltd. is trying to use three production functions. The payoff of each production function is given below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | **Production function** | | |
| **State of nature** | **Prob.** | **1** | **2** | **3** |
| **Best possible** | 0.3 | 10000 | 10200 | 8000 |
| **Most likely** | 0.4 | 6000 | 6750 | 6800 |
| **Worst possible** | 0.3 | 0 | (1000) | (13600) |

**Required:**

1. Expected monetary values of each. [4 marks]
2. The standard deviation of each. [4 marks]
3. Coefficient of variation of each. [4 marks]

(b) Write brief notes on production probability curve. [8 marks]

**QUESTION THREE (20 MARKS)**

(a) State the law of diminishing marginal returns and its assumptions.

[8 marks]

(b) Discuss the barriers of geographical mobility of labor and its policy measures.

[12 marks]

**QUESTION FOUR (20 MARKS)**

(a) Using a well-labeled diagram, explain the stages of productions. [10 marks]

(b) Prove that the exponents of capital and labor in the Cobb-Douglas production function represent elasticities. [10 marks]

**QUESTION FIVE (20 MARKS)**

(a) Consider the following demand and cost functions:

P = 75 – 0.5Q

TC = 150 + 40Q

1. Determine profit maximizing quantity and price. [8 marks]
2. Determine revenue maximizing quantity and price. [6 marks]

(b) Highlight factors affecting supply. [6 marks]