ĐẠI HỌC QUỐC GIA HÀ NỘI   Cộng hòa xã hội chủ nghĩa Việt Nam
TRƯỜNG ĐẠI HỌC KINH TẾ   Độc lập – Tự do – Hạnh phúc

ĐỀ THI KẾT THÚC HỌC PHẦN
KINH TẾ VI MÔ CHUYÊN SÂU INE2101E
ĐỀ SỐ 2 (CODE 2)
Thời gian làm bài: 120 phút

Không sử dụng tài liệu

Question 1. 30 points

Ms. Laura loves drinking tea (x_1) with honey (x_2). For each bag of tea, she would like to add two spoons of honey.

a. Write down the utility function that represents Laura's preferences. (15 points)

b. Suppose each bag of tea costs Laura $2, a spoon of honey costs her $3 and her income is $48, find her optimal consumption bundle. Write the Laura's budget function, her optimal bundle. (15 points)

Question 2. 20 points

Cost production:

a. Consider production function given by $Y = F(x, y) = 5x^{0.3}y^{0.7}$

Does this exhibit constant, increasing, or decreasing returns to scale? (10 points)

b. The technical rate of substitution between factors y and x is -4. If you desire to produce the same amount of output but cut your use of x by 3 units, how many more units of y will you need? (10 points)

Question 3. 20 points

Consider a market with demand function $P = 250 - 10Q$ (where $Q = Q1 + Q2$) and two firms with constant MC = 10, TFC = 0.

a. Find the best response functions of firm 1 and firm 2. Draw the graph (10 points)

b. Find the Cournot equilibrium profit per firm. (10 points)

Question 4. (30 points)

For each of the following questions, state True or False and explain briefly.

    a. Pareto efficiency is an economic state where resources cannot be reallocated to make one individual better off without making at least one individual worse off. (10 points)

b. A natural monopoly occurs when a firm cannot operate at an efficient level of output without losing money. Many public utilities are natural monopolies of this sort and are therefore regulated by the government. (10 points)

c. In a Robinson Crusoe economy, the firm's isoprofit line is an upward sloping curve with the intercept equals the profit π and the slope equals the wage rate ω. (5 points)

d. As long as the welfare function is increasing in each individual's utility, a welfare maximum will be Pareto efficient. Furthermore, every Pareto efficient allocation can be thought of as maximizing some welfare function. (5 points)