Scott Christian UNIVERSITY

SCHOOL OF PROFESSIONAL STUDIES

BACHELOR OF BUSINESS INFORMATION TECHNOLOGY

UNIT CODE/NAME: BBIT 113: MICRO ECONOMICS

September- December 2019/2020 End Semester Exam - Time: 2 Hours

Instructions: Answer Question ONE (Compulsory) and any other TWO questions.

QUESTION ONE

a) What are the major differences between micro economics and macroeconomics **(4 Marks)**

b) Explain any four non-price factors affecting the demand. **(4 Marks)**

c) Define monopolistic competition. Explain the characteristics of monopolistic competition. **(7 Marks)**

d) Explain the following. **(4 Marks)**

i) Economies of Scale

ii) Oligopoly

e) The following equations describe the supply and demand conditions for SCU Canteen specials:

$Q_s = 30 + 3P$

$Q_d = 100 - 2P$

i) Complete the following Supply and Demand table. **(5 Marks)**

Price (P)	0	10	20	30	40	50
Qs						
Qd						

ii) Sketch a well labeled diagram of the supply and demand curves for the above data. **(4 Marks)**

iii) Determine the equilibrium price and quantity. **(2 Marks)**

QUESTION TWO

Consider a production function for a firm: $Q = 2K^{1/2}L^{1/2}$ where Q is output, K is capital, and L is labor. Suppose initially K is equal to 25 units and L is equal to 16 units. You also know that the price of K, Pk, is \$10 per unit of K and the price of L, Pl, is \$4 per unit of L.

a) Given the above information, what is the value of output? **(2 Marks)**

b) What is the total cost of producing the output you calculated in (a)? **(2 Marks)**

c) What is the average total cost of producing this level of output? **(2 Marks)**

d) Suppose the amount of labor increases to 32 units and the amount of capital increases to 50 units. Given this information, what level of output can the firm now produce?
(2 Marks)

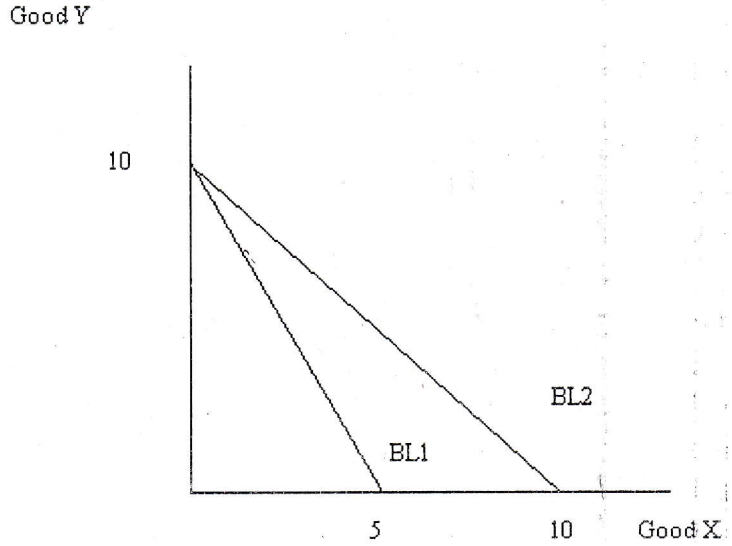
e) Given the information in (d), what is the total cost for the firm of producing this level of output? **(2 Marks)**

f) Given the information in (d) and (f), calculate the firm's average total cost of producing this new level of output. **(3 Marks)**

g) Given your answer to the above set of questions, what can you conclude about returns to scale for this firm? **(2 Marks)**

QUESTION THREE

Use the graph below to answer the questions that follow.



You are told that Aisha's income is $100 and he spends all of this income on either good X or good Y. BL1 is his initial budget line.

a) Given BL1 and the above information, what is the price of good X and the price of good Y? **(3 Marks)**

b) The graph also depicts Aisha's BL2. What is a likely explanation for why Aisha's budget line changed from BL1 to BL2? Be specific in your answer. **(2 Marks)**

c) Suppose you are told that Aisha consumes 3 units of good X and 4 units of good Y when he maximizes his utility subject to his income and the prices of good X and good Y he faces with BL1. When Aisha's budget line is BL2, he maximizes his utility by consuming 8 units of good X. Given this information, how many units of good Y does he consume if he faces BL2 and he is maximizing his utility? **(3 Marks)**

d) If we constrain Aisha to have the same utility as he had when he faced BL1, but assume he is now facing the new prices of BL2, will this new BL (in class this was "BL3") relative to BL2 reflect an increase or a decrease in income? Explain your answer.
(3 Marks)

e) Suppose you are told that on BL3 Aisha maximizes his utility when he consumes the bundle (X, Y) = (5, 2). From the given information calculate Aisha's income and substitution effect. **(2 Marks)**

f) Given the above information, what is Aisha's adjusted income for BL3? **(2 Marks)**

QUESTION FOUR

Consider a monopolist described by the following equations:

Market demand for monopolist's product: $P = 100 - Q$

ATC for monopolist: $ATC = 20 + (3/10)\,Q$

MC for monopolist: $MC = 20 + (3/5)Q$

a) Given the above information, what is the profit maximizing price and quantity for the single price monopolist? You should round your answers to the nearest whole number **(3 Marks)**

b) Given the above information, what is the level of profit for this single price monopolist? **(3 Marks)**

c) Suppose this monopolist is regulated to produce at that quantity where price equals average total cost. Calculate the quantity the monopolist will produce and the price it will charge given this regulatory scenario. **(3 Marks)**

d) Calculate the level of profits for the monopoly if it is regulated to produce that quantity where price equals average total cost. Explain how you got your answer. **(3 Marks)**

e) Suppose this monopolist is regulated to produce at that quantity where price equals marginal cost. Calculate the quantity the monopolist will produce and the price it will charge given this regulatory scenario. **(3 Marks)**

QUESTION FIVE

a) Explain four characteristics of a monopolistic market. **(4 Marks)**

b) Consider a monopolist where the market demand curve for the produce is given by $P = 520 - 2Q$. This monopolist has marginal costs that can be expressed as $MC = 100 + 2Q$ and total costs that can be expressed as $TC = 100Q + Q^2 + 50$.

i) Given the above information, what is this monopolist's profit maximizing price and output if it charges a single price? **(3 Marks)**

ii) Given the above information, calculate this single price monopolist's profit. **(3 Marks)**

iii) At the profit maximizing quantity, what is this monopolist's average total cost of production (ATC)? **(3 Marks)**

iv) At the profit maximizing quantity, what is the profit per unit for this single price monopolist? **(2 Marks)**