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2. i. In a competitive industry, the market-determined price is GH¢12. For a firm currently producing 50 units of output, short-run marginal cost is GH¢15, average total cost is GH¢14, and average variable cost is GH¢7. Is this firm making the profit-maximizing decision? Why or why not? If not, what should the firm do? **(8marks)**

   ii. In a different competitive market, the market-determined price is GH¢25. A firm in this market is producing 10,000 units of output, and, at this output level, the firm's average total cost reached its minimum value of GH¢25. Is this firm making the profit-maximizing decision? Why or why not? If not, what should the firm do? **(8marks)**

   iii. Suppose a firm is currently using 500 labours and 325 units of capital to produce its product. The wage rate is GH¢25, and the price of capital is GH¢130. The last labour adds 25 units to the total output, while the last unit of capital adds 65 units to total output. Is the manager of this firm making the optimal input choice? Why or why not? If not, what should the manager do? **(9marks)**

3) Consider a price-taking firm that has total fixed cost of GH¢50 and faces a market determined price of GH¢ 2 per unit for its output. The wage rate is GH¢10 per unit of labour, the only variable input. Using the following table, answer the questions below.

(1) Unit of Labour	(2) output	(3) marginal product	(4) marginal revenue	(5) marginal cost	(6) profit
1	5	______	________	________	______
2	15	______	________	________	______
3	30	______	________	________	______
4	50	______	________	________	______
5	65	______	________	________	______
6	77	______	________	________	______
7	86	______	________	________	______
8	94	______	________	________	______
9	98	______	________	________	______
10	96	______	________	________	______

a. Fill in the blanks in column 3 of the table by computing the marginal product of labour for each level of labour usage. **(4mark)**

b. Fill in the blanks in column 4 of the table by computing the marginal revenue product for each level of labour usage **(4mark)**

c. How much labour should the manager hire in order to maximize profit? Why? **(2mark)**

d. Fill in the blanks in column 5 of the table by computing marginal cost **(4marks)**

e. How many units of output should the manager produce in order to maximize profit? Why? **(4marks)**

f. Fill in the blanks in column 6 with the profit earned at each level of labour usage. **(3mark)**

g. How much labour should the manager hire when the wage rate is GH¢20? How much profit is earned? Is marginal product greater or less than average product at this level of labour usage? Why does it matter? **(4 marks)**

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CHRISTIAN SERVICE UNIVERSITY COLLEGE
KUMASI, GHANA
CSUC SCHOOL OF BUSINESS
DEPARTMENT OF ACCOUNTING AND FINANCE

END OF SECOND SEMESTER EXAMINATIONS – 2018/19 ACADEMIC YEAR

LEVEL 300
COURSE CODE: COURSE TITLE

CSBF 324: MANAGERIAL ECONOMICS

<u>SECTION B</u> ***(25marks each)***

- *<u>ANSWER TWO QUESTIONS FROM THIS SECTION</u>*

1. a) Consider the general demand function:

$Q = 8{,}000 - 16P + 0.75M + 30P_R$

i. Derive the equation for the demand function when M=GH¢30,000 and P_R=GH¢50 **(4marks)**

ii. Interpret the intercept and slope parameters of the demand function derived in part i. **(4marks)**

iii. Using the demand function from part i, calculate the quantity demanded when the price of the good is GH¢1,000 and when the price is GH¢1,500. **(3marks)**

iv. Calculate the demand price for 24,000 units of the good. Give an interpretation of this demand price **(4 marks)**

b Starbo Airline flies passengers between Accra and Kumasi making one round-trip daily using a leased Boeing 727 aircraft. Consider the number of passengers served daily as the output for the airline. Identify each of the following costs as either a variable or a fixed cost and provide justification for your answer.

i. Cost of in-flight snacks and beverages for passengers **(2marks)**

ii. Expenditure on jet fuel **(2marks)**

iii. Labour expense for pilots **(2marks)**

iv. Monthly lease payment for Boeing 272 during the 36-month term of the lease **(2marks)**

v. Monthly fee at two airports for passengers check-in/ticketing counter space (airports charge airlines on a "pay-as-you-go" basis) **(2marks)**