



MACHAKOS UNIVERSITY

University Examinations for 2018/2019 Academic Year
SCHOOL OF BUSINESS AND ECONOMICS
DEPARTMENT OF BUSINESS ADMINISTRATION
FIRST YEAR SECOND SEMESTER EXAMINATION FOR
MASTER OF BUSINESS ADMINISTRATION
BBA 821: MANAGERIAL ECONOMICS

DATE: 13/5/2019

TIME: 9.00-12.00 PM

INSTRUCTIONS

Answer Question One (1) and Any Other Three

QUESTION ONE (COMPULSORY) (24 MARKS)

Read the following case and answer question (a) below:

WAWA Company deals with the production of timber and given the weight of the raw materials, the Company is located in the countryside in close proximity to raw material sources. The Company management is fully aware that their business is labour intensive but is not sure of the optimal level of labour employment. Of late there has been intense debate among the Board of Directors with some accusing the CEO of over employment thereby eroding company profits while others have defended the CEO on grounds that the business is labour intensive and hence continued expansion must be accompanied with expanded labour employment.

A proposal by the financial director that a consulting firm be engaged to help establish the optimal level of labour employment was opposed by most directors on the grounds that it will be a costly venture. In the end, the directors agreed that the CEO should gather data on labour employment and the corresponding production and then engage the services of a finalist managerial economics student to determine the optimal level of labour employment for the company. Further, it was agreed that the student should not be paid an amount exceeding Kshs 50,000 for the services.

The CEO has gathered the following data on labour employment and production:

Labour Employment (L)	Total Output (Q)
0	0
1	60
2	160
3	290
4	440
5	550
6	600
7	620
8	620
9	610
10	590

- a) i In your view, is WAWA Company in its short run or long run? Explain your answer. (3 marks)
- ii As a Managerial Economics student, use the data to advise the Board of WAWA Company on the optimal level of labour employment assuming that the selling price per unit output is Kshs 100 and that each unit of labour is paid Kshs 5000. Convince the Board why the company should not employ less or more than the optimal level. (10 marks)
- b) What is the basis of profit being maximized at the point where $MR=MC$? (3 marks)
- c) Explain the process of price fixation under the cost-plus pricing strategy. (4 marks)
- d) With reference to shareholder wealth maximization model, discuss the managerial actions that would help improve the profit levels of a firm. (4 marks)

QUESTION TWO (12 MARKS)

- a) Makuti Carpets, a carpet manufacturing and exporting firm, has to supply an order for 2000 pieces of woolen carpets of two varieties X and Y to Machakos University Hotel for its conference rooms. The joint cost function for the two varieties of the carpets is given as:
- $$TC = 4X^2 + 9Y^2 - XY$$
- The quantity of X and Y are not specified and so the firm is forced to supply any combination. The firm wishes to minimize the cost of producing the carpets but meet the demand by Machakos University Hotel.
- i. Determine how many of each type of carpet the firm will produce to minimize costs. (6 marks)

- ii. What will be the minimum cost of production? (2 marks)
- b) A firm's demand and cost function is given as:
- $Q_d = 70 - 0.5P$ (Demand)
- $TC = 10 + 5Q^2$ (Total cost)
- Where Q is output produced and sold and P is the market price. Determine level of output that;
- i. Maximizes Total Revenue (2 marks)
- ii. Maximizes Profits (2 marks)

QUESTION THREE (12 MARKS)

The Dean of the School of Business and Economics at Machakos University is considering introducing a new degree program; Bachelor of Office Management. The planning subcommittee has estimated that it will cost Kshs 500,000 per year to maintain classrooms, furniture and equipment. The Lecturer's salaries plus supplies will cost Kshs 200 per student per year. If the University charges Kshs 1200 in tuition fees per student per year:

- a) How many students should the School enroll so as to break even? (3 marks)
- b) Determine the total revenue, total cost and total profit or loss at this level of output (5 marks)
- c) Suppose the University Management sets a profit target of Kshs. 600,000 from the programme per year, how many students should the school enroll to achieve the profit target? (4 marks)

QUESTION FOUR (12 MARKS)

- a) The table below gives the expected cash flows from two projects A and B.

YEAR	CASH FLOW	
	PROJECT A	PROJECT B
0 (INITIALCOST)	1000	2000
1	500	1500
2	1000	1000
3	600	800
4	800	500

- If only one of the projects has to be recommended for implementation. Which one would you recommend using NPV (Assume 10% discount rate) (3 marks)
- b) Define the term Capital Budgeting (2 marks)
- c) Using an example explain steps of capital budgeting (7 marks)

QUESTION FIVE (12 MARKS)

- a) A profit-maximizing firm faces the following constrained maximization problem
Maximize: $\pi(x, y) = 80x - 2x^2 - xy - 3y^2 + 100y$
Subject to: $x + y = 12$
where: x =Quantity produced
 y =Advertising expenditure
Determine profit-maximizing levels of output and advertisement (4 marks)
- b) Why should a manager be keen to understand the nature of demand facing his/her product in the market? (4 marks)
- c) Briefly, explain the decision making process by managers. (4 marks)