



MACHAKOS UNIVERSITY COLLEGE

(A Constituent College of Kenyatta University)
University Examinations for 2015/2016 Academic Year

SCHOOL OF BUSINESS AND ECONOMICS

**DEPARTMENT OF BUSINESS ENTREPRENEURSHIP AND MANAGEMENT
SCIENCES**

FIRST SEMESTER EXAMINATION FOR DIPLOMA IN ACCOUNTANCY

2804/302 MANAGERIAL ACCOUNTING

Date: 5/8/2016

Time: 8:30 – 10:30 AM

INSTRUCTIONS

Answer Question One And Any Other Two Questions

QUESTION ONE

a) The cost of electricity and total hour of operation for six months is as follows:

Month	Total Hours of operation (000's)	Total Electricity Bill (Sh.000's)
January	0.40	32.0
February	0.45	32.5
March	0.50	35.0
April	0.60	41.0
May	0.35	27.0
June	0.30	26.0

Using the method of Least Squares regression to estimate the cost behavior of electricity and interpret the values of a and b. (15 marks)

b) A firm produces and sells three products A, B and C as per the following table.

	A	B	C
Sales (Units)	500	600	400
Unit selling Price (Sh.)	150	200	230
Unit variable cost (Sh.)	80	60	150

Fixed cost is Ksh. 400,000. Determine the break-even sales.

(15 marks)

QUESTION TWO

A manufacturing firm has three production facilities A, B and C and four distribution centres 1, 2, 3 and 4. The distribution costs, and their requirements are as shown below.

To From	1	2	3	4	Supply
A	60	90	80	80	600
B	50	60	45	65	500
C	70	30	25	35	400
Demand	350	750	120	280	1,500

Determine the optimal routing and its corresponding total costs using VAM (20marks)

QUESTION THREE

A firm produces three products X, Y and Z each of which passes through the processes 1, 2 and 3. Each of the unit of product X requires 3, 4 and 2, a unit of Y requires 5, 4 and 4, while each unit of product Z requires 2, 4 and 5 hours respectively in the three processes. Every week 60 hours are available in processes 1, 72 hours in process 2 and 100 hours in process 3. The unit contribution of product X is Sh.50, of product Y is Ksh.100 and product Z is Ksh.80.

Required:

- Formulate the problem as LPP and determine the number of units of each product should be produced each week to maximize total contribution.
- Determine if any capacity will remain unutilized.

(20 marks)

QUESTION FOUR

A firm manufactures a uniform product whose selling price is Ksh.200. it has a capacity of 100,000 units. The variable cost per unit is Ksh.50. The fixed costs are estimated at Ksh. 300,000 up to 50% capacity utilization and Ksh. 360,000 above that level and Ksh. 420,000 if utilization is 80% or above

- i. Determine the break-even point in sales and in units
- ii. Calculate operating profit of the firm at 70%, 80% and 90% capacity utilization.
- iii. If the firm manufactures and sells 60,000 units in a year due to market constraints. Determine the margin of safety. (20 marks)

QUESTION FIVE

The following table shows information on activities required for a project.

Activity Label	Activity Node	Duration (Days)
A	1-2	3
B	1-3	5
C	1-4	11
D	2-5	5
E	3-5	9
F	3-6	12
G	3-7	6
H	4-6	7
I	5-7	5
J	6-8	8
K	7-8	10

Draw the arrow diagram

Calculate the floats (20 marks)