



THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

A. M. E. C. E. A
CITY CAMPUS

P.O. Box 62157
00200 Nairobi - KENYA
Telephone: 891601-6
Fax: 254-20-891084
E-mail: academics@cuea.edu

MAIN EXAMINATION

JANUARY – APRIL 2017 TRIMESTER

FACULTY OF COMMERCE

MBA EVENING PROGRAMME

CAC 610: MANAGERIAL ACCOUNTING

Date: APRIL 2017

Duration: 3 Hours

INSTRUCTIONS: Answer ALL Questions

- Q1. a) B-TEC Ltd. produces a wide range of electronic components. The company is preparing budgets for the financial year 2017. The management accountant has obtained the following data on component X, a key element in the master budget:

Year	2013	2014	2015	2016
Sales (units)	150,000	180,000	200,000	230,000
Sales revenue (Sh)	294,820	346,706	363,000	448,800
Variable costs (Sh)	132,820	162,706	179,000	200,800

Sales for the year 2017 have been estimated at 260,000 units.

Required:

- Using linear regression, project the trend and estimate the contribution for the year 2017. **(6 Marks)**
- Calculate the 95% confidence interval of the contribution forecast for the year 2017 in (i) above, given the standard error of the forecast is Sh. 14,500 and the t-value is 4.303. Interpret your answer. **(6 marks)**
- Critic the use of regression analysis in forecasting. **(6 marks)**

- b) Mugaka Ltd. produces and sells product X. The product requires skilled labour and entails a learning curve effect in its production. An extract of the production hours for the product is provided below:

Cumulative production (units)	Cumulative time (hours)
1	200
2	360
4	648
8	1,166

Additional information:

1. The following information relates to the previous production period:
 - i) Cumulative production at start of period 528 units
 - ii) Production during the period 86 units

2. The standard and budgeting data for the product were as follows:
 - i) Budgeted production 86 units
 - ii) Budgeted overheads Sh. 150,903
 - iii) Standard labour cost Sh. 10 per hour
 - iv) Standard material cost Sh. 250 per hour

Required:

- i) The learning curve rate **(4 marks)**
 - ii) Unit production cost of product X during the previous production period **(8 marks)**
- Q2. A firm manufactures 3½ inch diskettes. The firm faces the following price and structures on these diskettes.
 Average price per diskette= Sh. 40
 Variable manufacturing cost per unit= Sh. 12.50
 Variable selling and shipping costs= Sh. 2.50
 Fixed annual manufacturing costs= Sh. 80 million
 Annual fixed selling and administration costs= Sh. 100 million
- Required;
- i) Determine the anticipated profit if sales are 15 million diskettes. **(2 marks)**

 - ii) Determine the Break-even point (B..E.P) in physical units and in monetary units. **(4 marks)**

 - iii) A special one time order has been received to manufacture one million diskette. Capacity is available and the order would not affect the firm's other sales. Special ordering and shipping costs of Sh. 12.50 per unit and no variable selling and shipping costs will be required. Determine the minimum price per diskette that the firm can accept on this special order so as to at least break-even. **(6 Marks)**

iv) Discuss four assumptions of cost volume profit analysis. **(8 marks)**

Q3. You are the head of management accounting department of Mashujaa Consultants Ltd., a firm engaged in organizing workshops and seminars on the implementation of public sector policies. Recently, the firm, won a major training contract that will involve organizing workshops in eight towns in the country. The workshops will be organized on a weekly basis in all eight towns throughout the year. As part of the preparations for the workshops, the firm intends to enter into one year contract with Miundo properties Ltd. which owns workshops facilities in each of the eight towns. Miundo properties Ltd. has four types of facilities with different capacities as shown below:

Facility	Capacity (No. of participants)	Cost per workshop (Sh.)
A	100	600,000
B	200	1,080,000
C	300	1,440,000
D	400	1,600,000

Additional information:

1. Under the terms of contract with Miundo properties Ltd., only one type of facility can be selected to be used for all the workshops.
2. Mashujaa Consultants Ltd., will charge a standard fee of Sh. 8,000 per workshop participant.
3. Facilitators for the workshops will be drawn from Mashujaa Consultants Ltd., the central and county government.

From past experience, the number of workshop participants will depend on whether the workshop is facilitated by Mashujaa Consultants Ltd., the central or the county government.

The proportion of workshops to be facilitated by each of the three entities and the expected number of participants are as follows:

Facilitator	% of workshops to facilitate	Expected number of participants per workshop
Mashujaa Consultants Ltd.	20	100
Central government	30	400
County government	50	200

Assume a 52-week year.

Required:

- i) Using the expected value (EV) criterion, advise Mashujaa Consultants Ltd. on the workshop facility to select under the contract with Miundo properties Ltd. **(12 Marks)**
- ii) Assess whether your decision in (i) above would change if the following criteria were used:
 - a) Maximin criterion **(4 marks)**
 - b) Minimax criterion **(4 Marks)**

- Q4. a) Mauzo Ltd., a manufacturing company, is in the process of preparing its budget for the upcoming production period. The following data relate to the company for the year ended 30th November 2016:

Year	Month	Machine hours "000"	Electricity expense (Sh. "000")
2015	December	51	960
2016	January	45	930
2016	February	51	930
2016	March	58.5	885
2016	April	63	750
2016	May	48	795
2016	June	39	750
2016	July	39	750
2016	August	46.5	795
2016	September	52.5	825
2016	October	64.5	870
2016	November	72	1,020

The total annual and monthly average expenditures for the year ended 30th November 2016 were as follows:

	Machine hours	Electricity expense (Sh.)
Annual (Total)	630,000	10,260,000
Monthly (Average)	52,500	855,000

Required:

Determine the forecasting model and hence the forecasted electricity expense in the month of December 2016 with an estimated 100,000 machine hours using:

- i) The high-low method **(3 Marks)**
 - ii) The least squares regression analysis **(7 Marks)**
- b) Discuss five roles of managerial accounting **(10 Marks)**

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