



(Knowledge for Development)

KIBABII UNIVERSITY
UNIVERSITY EXAMINATIONS
2021/2022 ACADEMIC YEAR
FIRST YEAR SECOND SEMESTER
MAIN EXAMS
FOR THE DEGREE OF MASTER OF BUSINESS
ADMINISTRATION

COURSE CODE: MBA 807

COURSE TITLE: MANAGEMENT ACCOUNTING

DATE: 29TH SEPTEMBER, 2022 TIME: 9.00AM – 12NOON

INSTRUCTIONS TO CANDIDATES

- 1. Answer Question One in Section A and Any other THREE (3) Questions in Section B
- 2. Question one carries 40marks and each of the other THREE questions carry 20 marks each.

TIME: 3 Hours



KIBU observes ZERO tolerance to examination cheating

This Paper Consists of Printed Pages. Please Turn Over.

SECTION A

QUESTION ONE

- a) Understanding cost behavior patterns is important in making financial planning and cost control decisions. In relation to the above statement, describe three ways in which costs might be classified according to behavior (6 Marks)
- b) Shadow prices may be used in the setting of transfer prices between divisions in a company, where the intermediate products being transferred are in short supply.
Required: Explain why the transfer prices thus calculated are more likely to be favoured by the management of the divisions supplying the intermediate products rather than the management of the divisions receiving the intermediate products. (8 marks)
- c) Aberdares Company Ltd. is a manufacturing company which produces and sells a single product known as T_1 at a price of Sh.10 per unit. The company incurs a variable cost of Sh.6 per unit and fixed costs of Sh.400,000. Sales are normally distributed with a mean of 110,000 units and a standard deviation of 10,000 units. The company is considering producing a second product, T_2 to sell at Sh.8 per unit and incur a variable cost of Sh.5 per unit with additional fixed costs of Sh.50,000. The demand for T_2 is also normally distributed with a mean of 50,000 units and standard deviation of 5,000 units. If T_2 is added to the production schedule, sales of T_1 will shift downwards to a mean of 85,000 units and standard deviation of 8,000 units. The correlation coefficient between sales of T_1 and T_2 is -0.9 .

Required:

- i). The company's break-even point for the current and proposed production schedules. (6 marks)
- ii). The coefficient of variation for the two proposals. (8 marks)
- iii). Based on your computation's in (i) and (ii) above advise the company on whether to add T_2 to its production schedule. (4 marks)
- d) Management accountants are required to conduct themselves ethically. A commitment to ethical professional practice requires observation of principles that express values and standards that guide conduct such as honesty, fairness, objectivity and responsibility.

Required:

With reference to the above statement, summarize six benefits of ethical behavior by management accountants in business (8 Marks)

SECTION B

QUESTION TWO

- a) Explain why a high correlation between the independent and dependent variables may or may not necessarily prove that a change in the independent variables may or may not necessarily

prove that a change the independent variable causes a change in the dependent variable. (3 marks)

b) Kelele Company Ltd. manufacturers crockery. The company is considering the use of simple and multiple linear regression analysis to forecast annual sales for they are 2001 because previous forecasts have been inaccurate. The sales forecast will be used to initiate the budgeting process and to identify more accurately the underlying process that generates sales. The financial controller of the company has considered many possible independent variables and equations to predict sales and has narrowed his choices to four equations. He used annual observations from twenty prior years to estimate each of the four equations. The following is a statistical summary of the four equations and definitions of the variables used in the exercise.

	Equation I	Equation II	Equation III	Equation IV
Dependent variable	Y_t	Y_t	Y_t	Y_t
Independent variable	Y_{t-1}	Z_t	Z_t	$N_{t-1}, Z_{t-1}, Z_{t-2}$
Intercept	(sh) 2,500,000	5,000,000	4,500,000	3,000,000
Coefficient of independent variable	5.5	0.00005	0.00006	*
T-statistic	11.00	50.00	25.00	*
Standard error of estimate	(sh) 2,500,000	2,550,000	2,600,000	2,450,000
Coefficient of determination	0.94	0.90	0.81	0.96

The other statistics for Equation IV were estimated as follows:

Variable	$N_t - 1$	Z_t	$Z_t - 1$
Coefficient	50	0.00001	0.000015
T-statistic	20.00	7.50	15

Where:

- Y_t = forecast sales (in shillings) for the company in time period t
- Y_{t-1} = actual sales (in shillings) for period t - 1
- Z_t = forecast Kenya gross national product in time period t
- Z_{t-1} = actual Kenya gross national product in time period t - 1
- N_{t-1} = company's net income in time period t - 1

Required:

- a) Using the relationship $T = a + bx$, write Equations II and IV (3 marks)
- b) If the actual sales for the year 2000 were sh.7,500,000, what would be the forecast sales for the year 2001? (2 marks)
- c) Explain the meaning and significance of the coefficient of determination. (4 marks)
- d) Explain why the Financial Controller might prefer Equation III to Equation II. (2 marks)
- e) Explain the advantages and disadvantages of using Equation IV to forecast annual sales. (6 marks)

QUESTION THREE

Kanzel Ltd. was formed ten years ago to provide business equipment solutions to local business. It has separate divisions for research, marketing, product design, technology and communication services, and now manufactures and supplies a wide range of business equipment. To date the company has evaluated its performance using monthly financial reports that analyze profitability by type of equipment. The managing director of Kanzel Ltd. has recently returned from a course in which it has been suggested that the "Balanced Scorecard" could be a useful way of measuring performance.

Required:

- a) Explain the "Balanced Scorecard" and how it could be used by Kanzel Ltd. to measure its performance. (10 marks)
- b) The managing director of Kanzel Ltd. also overheard someone mention how the performance of their company had improved after they introduced "Benchmarking."

Required:

Explain "Benchmarking" and how it could be used to improve the performance of Kanzel Ltd. (10 marks)

QUESTION FOUR

- a) The Z division of XYZ Ltd., produces a component which it sells externally, and can also be transferred to other divisions within the organization. The division has set a performance target for the coming financial year of residual income of Shs. 5,000,000. The following budgeted information relating to Z division has been prepared for the coming financial year.
 1. Maximum production/sales capacity 800,000 units.
 2. Sales to external customers: 500,000 units at Sh.37.
 3. Variable cost per component Sh.25.
 4. Fixed costs directly attributable to the division Sh.1,400,000.
 5. Capital employed: Sh.20,000,000 with cost of capital of 13%

The X division of XYZ Ltd has asked Z division to quote a transfer price for units of the component.

Required:

- i Calculate the transfer price per component which Z division should quote to X division so that its residual income target is achieved. (6 marks)
- ii Explain why the transfer price calculated in (i) above may lead to sub-optimal decision making from the point of view of XYZ Ltd taken as a whole. (4 marks)
- b) A manufacturer produces and sells two products, A and B. The unit variable cost is sh.12 and sh.8 for A and B respectively. A review of selling prices is in progress and it has been estimated that, for each product and increase in the selling price would result in a fall in demand of Sh.500 units per every Sh.1 increase in price and similarly a decrease of Sh.1 in price would result in an increase in demand of 500 units.

The current sales prices and sales demand are:-

	Price (Sh.)	Demand (Units)
A	30	15,000
B	58	21,000

Required:

Calculate the profit-maximizing price for each product.

(10 marks)

QUESTION FIVE

Tritech Ltd. has semi-automatic machine process in which a number of tasks are performed. A system of standard costing and budgetary control is in operation. The process is controlled by machine attendants who are paid a fixed rate per hour of process time. The process has recently been reorganized as part of an ongoing total quality management programme in the company.

The nature of the process is such that the machines incur variable costs even during non-productive (idle time) hours. Non-productive hours include time spent on the rework of products.

(Note: Gross machine hours = productive hours + non-productive hours)

The standard data for the machine process are as follows:

- Standard non-productive (idle time) hours as a percentage of gross machine hour is 10%.
- Standard variable machine cost per gross hour is Sh.270.
- Standard output productivity is 100% that is one standard hour of work is expected in each productive machine hour.
- Machine costs are charged to production output at a rate per standard hour sufficient to absorb the cost of the standard level of non-productive time.

Actual data for the period August to November 2002 have been summarized below:

	August	September	October	November
Standard hours of Output achieved	3,437	3,437	4,061	3,980
Machine hours (gross)	4,000	3,800	4,200	4,100
Non-productive machine hours	420	430	440	450
Variable machine costs Sh. '000'	1,100	1,070	1,247	1,247
Variance analysis	Sh.	Sh.	Sh.	Sh.
Productivity	42,900 (A)	?	?	99,000 (F)
Excess idle time	6,000 (A)	?	?	12,000 (A)
Expenditure	20,000 (A)	?	?	111,000 (A)

Variance analysis (in % terms)

	%	%	%	%
Productivity	4.2 (A)	?	7.4 (F)	?
Excess idle time	5.0 (A)	?	4.8 (A)	?
Expenditure	1.9 (A)	?	10.0 (A)	?

Required:

- a) Calculate the machine variances for productivity, excess idle time and expenditure for each of the two months of September and October. (6 marks)
- b) In order to highlight the trend of variances in the months from August to November 2002, express each as a percentage term as follows:
- i Productivity variance as a percentage of standard cost of production achieved. (3 marks)
 - ii Excess idle time variance as a percentage of expected idle time. (4 marks)
 - iii Expenditure variance as a percentage of hours paid for all standard machine cost. (3 marks)
- c) Comment on the trend of variances in the August to November period and possible inter-relationships. Particularly in the context of the total quality management programme which is being implemented. (4 marks)