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KIRIRI WOMENS' UNIVERSITY OF SCIENCE AND TECHNOLOGY

UNIVERSITY EXAMINATION, 2024/2025ACADEMIC YEAR

THIRD YEAR, FIRST SEMESTER EXAMINATION

FOR THE DEGREE OF BACHELOR OF SCIENCE

(BUSINESS ADMINISTRATION)

Date: 7th August, 2024

Time: 11.30am –1.30pm

KBA 2408 COST ACCOUNTING

INSTRUCTIONS TO CANDIDATES

ANSWER **QUESTION ONE (COMPULSORY)** AND **ANY OTHER TWO** QUESTIONS

QUESTION ONE (30 MARKS)

CASE STUDY: GREENWICH ENGINEERING

Greenwich Engineering is a typical manufacturing company. Over the last decade, there has been an increase in product diversification and factory automation and a reduction in the direct labor hours worked each year. Competition has increased and the company wants to build a reputation as a global leader in implementing modern manufacturing methods. To be successful the senior managers recognize that they must improve existing management accounting systems. The Charlton Division has a standard costing system that was first introduced in the 1960s. Recently the managing director asked all managers for their comments on the existing management accounting system and to identify what changes they would like to see in the future.

One group of managers stated their concerns that the management accounting system has failed to evolve in a manner compatible with a changed technological and competitive environment. Several of the senior managers are now predicting that the standard costing system will have a less important role in the future and will not be used to judge managerial performance. This implies that variance analysis is less relevant compared to 20 years ago.
Another group of managers still believes there is a need for a standard costing system. In their view variance analysis has been important for many years and will continue to be important for judging managerial performance.

Data from existing standard costing system

Charlton began production of a new product last month. The company has established the following standard for one unit of the new product.

During the first month of production, 2,000 units were produced.

	Standard quantity or hours	Standard price or rate	Actual price or rate
Direct materials	3Kg	Sh.14	Sh.15.0
Direct labour	9 hours	Sh.17	Sh.17.5

Total direct material cost = Sh.87,000
Total direct labor cost = Sh.87350,000

It was difficult to get managers to agree on the standard, as the new product is significantly different from existing products. This is a typical problem faced by managers. Furthermore, the materials purchased are from a new supplier and the labor needed additional training. In recent years the division has tried to reduce the number of suppliers and improve the quality of the raw materials. If a new supplier is used there are often short-term problems with quality and higher failure rates for products.
The management accountant has done some research and found some information on alternative suppliers that were not available when the original standard was agreed. She estimates that the material could have been purchased at Sh.14.80 per kg.

There is often conflict between the management accountant and the purchasing department as prices for raw materials are not stable over time. The purchasing manager has repeatedly complained that he does not have the resources to constantly monitor changes in raw material prices. Data on comparative labor costs is also available. Locally the market rate for labour is 10% less than the standard rate per hour of Sh.17 paid by Charlton. The management accountant has also obtained some data on the relative productivity of direct labor. She estimates that the competitors work on the assumption that 8.5 hours of direct labor hours are required for each unit.

Required;

a) Calculate the planning and operating variances and discuss the problems of identifying the controllable variances. (5 Marks)

b) Briefly comment on the usefulness to management of statements of the relevant variances, reconciling the standard cost with the actual cost. (5 Marks)

c) Explain five advantages of standard costing to the organization. (5 Marks)

d) Explain why a marginal cost approach to variance analysis is more appropriate in environments such as Greenwich Engineering, where several different items are produced and sold. (5 Marks)

e) Highlight the steps, and information, required to establish the direct material purchase quantity budget. (5 Marks)

f) Explain the shortcomings of standard costing systems in a modern manufacturing environment. (5 Marks)

QUESTION TWO (20 MARKS)

a) Highlight the main purposes of cost accounting. (8 Marks)

b) Nixon an automobile technician has been operating a garage in Mombasa for the past two years. A year ago, he converted part of his garage into a welding shop making and selling metal doors and windows. He had anticipated that the cost of the welding shop would primary be final but has realized that the welding cost increased with the increase in with number of welding job assignments. The costs of welding job assignments are as follows:

Period	No. of Welding Job Assignment	Total cost Sh. '000'
September 2008	280	700
October 2008	800	860
November 2008	1240	110
December 2008	1000	960
January 2009	600	720
February 2009	920	910
March 2009	860	880
April 2009	1200	260

Required:

Formulate an equation to estimate the total cost of the welding shop and compute the cost of undertaking 1256 assignments using:

i) High–low method (6 Marks)

ii) Simple linear regression method (6 Marks)

QUESTION THREE (20 MARKS)

a) Given below is the consumption per week of a certain item.

Maximum consumption	400 kg
Normal/average consumption	300 kg
Minimum consumption	200 kg
Re-order / lead time	4 – 6 days
Re-order quality	1500 kg

Required:

i) Re-order Level (2 Marks)

ii) Min stock level (2 Marks)

iii) Max stock level (2 Marks)

iv) Average stock level (2 Marks)

b) A costing system is designed by the requirements of the organization. Highlight the conditions necessary for an effective cost accounting system (8 marks)

c) State the assumptions limiting the accuracy of the EOQ formula. (4 Marks)

QUESTION FOUR (20 MARKS)

a) Explain four types of cost classifications. (8 marks)

b) A new product will require an assembly operation which will be undertaken by an employee who will be paid a basic salary of Sh.105 of 35hrs pay week plus Sh.0.2 per unit assembled. He is guaranteed his basic wage even if output falls the expected weekly target of 350 units. If the weekly output is in excess of 350 units, the employees will be paid for overtime at the rate of Sh.45 for every additional 10 units plus Sh. 0.2 per unit assembled.

Required;

i) Calculate the planned labor cost in each case where the weekly output is focused at 300 units, 350 units, and 400 units.

(4 Marks)

ii) The first-week results in the assembly were 370 units for which the employee has actual gross earnings of Sh. 192.5. Prepare information for control which shows whether the actual wages paid were in line with the planned level wage cost.

(4 Marks)

iii) The company can arrange to subcontract output in excess of 350 units per week to an outside who will change for Sh. 55 per 100 units should they subcontract or use their employee.

(4 Marks)

QUESTION FIVE (20 MARKS)

a) Describe the composition of the overheads in an organization. (8 Marks)

b) The recovery of overhead as part of the cost of the product must include not only expenses directly allocated to the production department but also a share of the service department cost which are apportioned to them. The following information relates to both production and service departments of a food processing factory.

Amounts directly allocated to the production department

Department A	Ksh.400,000
Department B	Ksh. 520,000

Amount to be apportioned from service departments

Department X	Ksh.92,000
Department Y	Ksh 160,000

It is estimated that Department X will do 40% of its work for A: 30% for B and 30% for Y and Department Y will do 50% of its work for A, 30% for B, and 20% for X.

Required;

Apportion service department costs to the production department using:

i) Step Down Method

(4 Marks)

ii) Repeated Distribution Method

(4 Marks)

iii) Linear Algebra Method

(4 Marks)