



## MURANG'A UNIVERSITY COLLEGE (MRUC)

(A Constituent College of Jomo Kenyatta University of Agriculture & Technology)

SCHOOL OF COMMERCE AND ECONOMICS

UNIVERSITY EXAMINATION 2013

First YEAR 2ND SEMESTER EXAMINATION

DEGREE HRD

SPECIAL / SUPPLEMENTARY EXAMINATION

HEH 2103: COST & MANAGERIAL ACCOUNTING

DATE: 12<sup>TH</sup> MARCH 2015

TIME: 2 HOURS

### **INSTRUCTIONS:**

Answer Question *ONE* and any *OTHER TWO* Questions.

### **Compulsory Question** (30 marks)

Q1(a) Differentiate between

- (i) Direct cost and indirect cost.
- (ii) Period and product costs
- (iii) Overhead apportionment and absorption
- (iv) Cost centres and cost units
- (v) Prime cost and conversion cost.

(10 marks)

(b) Salama Ltd has *three* production departments, namely;

Processing, Assembly and Finishing. In addition, the company has two service departments; material procurement and general factory support.

The overhead costs of the company for the year ended 31 March 2012 were as follows:

	Sh	sh
	'000'	'000'
Indirect wages and supervision		
Processing	2,000	
Assembly	2,000	
Finishing	3,000	
Materials procurement	2,200	
General factory support	<u>2,960</u>	
	12,160	
Indirect materials:		
Processing	1,000	
Assembly	1,610	
Finishing	210	
Material procurement	0	
General factory support	<u>20</u>	
	2,840	
Lighting and heating	1,000	
Property taxes	2,000	
Insurance of machinery	300	
Depreciation of machinery	3,000	
Insurance of buildings	500	
Salaries of staff	<u>1,600</u>	<u>8,400</u>
		<u>23,400</u>

Additional information

1. Department	Book Value of machine Sh	Area occupied (Sq Mts)	Number of employees	Direct Labour hours	Machine Hours
Processing	8,000,000	10,000	300	1,000,000	2,000,000
Assembly	5,000,000	5,000	200	1,000,000	2,000,000
Finishing	1,000,000	15,000	300	2,000,000	

Material			
Procurement	500,000	15,000	100
General factory support	<u>500,000</u>	<u>5,000</u>	<u>100</u>
	<u>15,000,000</u>	<u>50,000</u>	<u>1,000</u>

2. The total cost of direct and indirect materials issues to the production department is during the period were s follows.

	Sh.
Processing	4,000,000
Assembly	3,000,000
Finishing	<u>1,000,000</u>
	<u>8,000,000</u>

3. The company uses the following bases to allocate overheads:

Cost	Base
Property taxes, lighting and heating, insurance	area
Employee-related expenditure	Number of employees
Depreciation and insurance of machinery	Book value of machinery

### **Required**

- (i) An overhead allocation and apportionment schedule of the company for the year ended 31 march 2012 (10 marks)
- (ii) Machine hours overhead absorption rate for the processing and assembly department. (3 marks)
- (iii) Direct labour hour overhead absorption rate for the finishing department. (3 marks)
- (iv) The following data relates to job No A10

Direct materials	sh 1,500,000
Direct labour	sh2, 080,000
Direct expenses	sh 420,000
Machine hour for processing	30
Machine hour for assembly	65
Direct labour hour for finishing	45

### **Required**

Prepare a cost statement for Job A4 showing the price that will be charged to the customer. (4 marks)

Answer **Any Two** Questions:

Q2. (a) Explain the reasons why costs must be separated into variable and fixed costs. (3 marks)

(a) State *four* differences between financial accounting and cost accounting. (4 marks)

(b) The following are the cost ledger balances as at 1<sup>st</sup> January 2012.

	Dr.	Cr.
Control account		22,000
Stores ledger account	8,500	
Work in progress account	6,600	
Finished goods account	7,000	
Production overhead account	<u>          </u>	<u>      100</u>
	<u><u>22,100</u></u>	<u><u>22,100</u></u>

**Additional information**

The operations during 2012 were:

	Sh.
Purchasers	40,000
Stores issued: production department	38,000
Production overhead	750
Office overhead	250
Wages: production department	45,000
Production overhead	800
Administrative/office overhead	4,500
Production overhead (excluding wages and materials)	15,000
Production overhead recovered	21,000
Administration expenses	4,500
Administrative overhead recovered	5,000
Goods sold	130,000
Finished goods in stock at the end of the year	5,000
Work in progress at end of year	3,100

**Required**

- (i) Write up the cost books (7 marks)
- (ii) Prepare a Profit and Loss account. (3 marks)

(iii) Extract a Trial Balance.

(3 marks)

**(Total: 20marks)**

Q3 Executive Tyre Dealers is a company specializing in the production of retread tyres.

Currently the company produces retread tyres only for small passenger vehicles which are sold at a price of sh500 per unit. The cost of retread for all types is the same and consists of the following:

	sh
Direct materials	150
Direct labour	80
Factory overheads	<u>120</u>
	<u><u>350</u></u>

NB: It is estimate that 50% of the factory overheads are available.

The company is contemplating opening a new factory in another part of the country. The new factory is expected to have the same cost structure as the one given above in addition to maintaining the current sales price. A sales commission of 2% of the selling price is to be paid on each unit sold.

The annual fixed costs of operating the new factory are expected to be as follows:

	Sh.
Rental of premises	240,000
Depreciation on plant and equipment	30,000
Selling and administration expenses	<u>130,000</u>
	<u><u>400,000</u></u>

### Required

- (a) Calculate the Break even level of output both in units and in shillings for the new factory. (7 marks)
- (b) Suppose the company intends to make a profit of sh 300,000 from the new undertaking, what output level, in units, should be attained. (7 marks)
- (c) Suppose that the maximum sales that can be achieved by the company amount to 3,000 units, What unit price should be charged to ensure that the company makes the same profit of sh 300,000? (6 marks)

**(Total: 20 marks)**

Q4(a) Explain *three* advantages of simple linear regression method. (6 marks)

- (b) Tech. Ltd has its own photocopying department. The photocopying costs include costs of copy machines, operators, papers, toner and utilities. The following data has be recorded for the last six months.

Months	Number of copies sh'000'	Total photocopying cost sh'000'
November 2011	11.5	102

December 2011	12	104
January 2012	12.5	106
February 2012	13	108
March 2012	13.5	111
April 2012	14	113

**Required:**

Formulate a predictor equation in form of  $y = a + b x$  to estimate the total cost of photocopying 15,500 copies using

- (i) High – low method. (6 marks)  
(ii) Simple linear regression method. (8 marks)

**(Total: 20 marks)**

Q5. The manufacture of product ‘Tee’ involves three production processes namely, welding, filing and spraying. In the month of November, 2000 units valued at sh 50 each entered production and the costs incurred for the three processes are given below:

Type Of Cost	Welding sh	Filing sh	Spraying sh	Total sh
Direct materials	40,000	60,400	69,240	169,640
Direct labour	60,000	80,000	100,000	240,000
Direct expenses	10,000	4,520	-	14,520
Manufacturing overhead				120,000

The output from each process was as follows:

Welding - 1840 units

Filing - 1740 units

Spraying - 1600 units

The estimated normal loss for each process was:

Welding 10%

Filing 5%

Spraying 10%

The loss in each process represented defective units which could be disposed of at the following values:

Welding	-	sh 30 per unit
Filing	-	sh 50 per unit
Spraying	-	sh 60 per unit

There were no stocks of materials or work – in-progress at the beginning or end of the month. The output of each process passes directly to the next process at cost without any provision for internal profit. Manufacturing overheads are absorbed by each process at 50% of the direct labour cost.

**Required**

Prepare:

- (a) Process accounts for each of the three processes. (10 marks)
- (b) Abnormal process loss and abnormal process Gain Account. (10 marks)

**(Total 20: Marks)**