AFRICA UNIVERSITY

(A United Methodist-Related Institution)

"Investing In Africa's Future"

FACULTY OF MANAGEMENT AND ADMINISTRATION

COURSE TITLE: MAC 201 COST ACCOUNTING

SEMESTER 1: FINAL EXAMINATION-NOVEMBER 2014

LECTURER MR I. RARAMI

TIME: 3 HOURS

INSTRUCTIONS

Answer **ALL** questions

Start each question on a new page in your answer booklet.

The marks allocated to each question are shown at the end of the question

Show all your workings

Credit will be given for presentations that are neat, logical and grammatically well constructed.

Use of a non-programmable calculator is permissible.

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QUESTION 1

a). Dzidzai Vana (Pvt) Ltd , a Mutare based company has the following production overhead costs:

	Machining	**Assembly**	**Finishing**	**Total**
	$	$	$	$
Production overheads	52022	29370	14750	96142

Passwell Chikoro the management accountant has decided that absorption rate for each cost centre is to be calculated using the following information:

Cost Centre	**Absorption Basis**	**Incurred**
Machining	Machine hour rate	10000 machine hours
Assembly	Direct Labour hour rate	5000 labour hours
Finishing	Percentage of direct wages	$15000 direct wages.

He told his junior Study More that, a regular washing machine takes 5 hours machining, 2 hours assembly and incurs $7.50 wages cost in the finishing department.

He also told his junior that a regular washing machine incurs a direct material cost of $220 per unit and a direct labour cost of $55 per unit.

Required:
i). Calculate the overhead absorption rates for the three cost centres. **[6 marks]**
ii). Calculate the total overheads absorbed by the machine. **[4 marks]**
iii). Calculate the total production cost per unit. **[4 marks]**

b). In January 2013, the budget for Good Goods machine shop shows the following:

Overheads $60 000.
Volume of activity 12 000machine hours.
In December the machine shop incurred $5400 of the overhead and 1050 machine hours were worked.

Required:
i). Calculate the predetermined absorption rate. **[2 marks]**
ii). Calculate the overhead under or over absorbed in January **[2 marks]**
iii). What causes the under or over absorption in this case. **[2 marks**]

c). Joy & Joyce Ltd allows 15 hours for a job involving the production of a set of units. Three employees Mercy, Lucia and David each did the job in 15, 11.5 and 10 hours respectively. The employee's normal rate of pay is $8 per hour.

Required:
i). Calculate the employees' earnings under the Halsey Scheme.
[3 marks]
ii). Calculate the employees' earnings under the Rowen Scheme.
[3 marks]

d). The standard daily output for Caro Caro firm with an eight working hour day is 100 units. Caro Caro pays its employees at the rate of $8 per hour. The bonus premium rate for production at or above standard is 20%. Employee's productions are as follows:

Name	Production Quantity
Jacob	100
Tafadzwa	110
Cosmore	120

Calculate the earnings of each employee on the basis of Gantt task & Bonus Scheme **[3 marks]**

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f).Mr Economist is facing storage and ordering problems at his warehouse. As a cost accountant he gave you the following management data material FGH:

Annual demand	1800 units
Cost of placing an order	$2 per order
Annual holding cost	$0.32 per unit

Required:
i). . Calculate the most economic order quantity for material FGH.
[2 marks]
ii). The total ordering costs **[1 marks]**
iii). The sum of the ordering and stock holding costs. **[1 marks]**

QUESTION 2

a). Elton, Suzy and Ashy products has two production departments: A and B and two production service departments X and Y.
Overhead costs have been attributed to these departments as follows:

Department	**$'000'**
A	950

B	880
X	125
Y	500
	2 455

An analysis of the services provided by each service department shows the following percentages of total time spent for the benefit of each department:

Service Dept	**Production/Service Departments**			
	A	B	X	Y
X	15%	25%	----	60%
Y	40%	35%	25%	-----

Show the apportionment of production service department costs to production departments using the Step Down Method and the Matrix distribution method. **[16 marks]**

b). State and explain the other two methods that may be used to reapportion the service cost centres. **[4 marks]**

QUESTION 3

Having attended a course on activity based costing (ABC), which was offered by Rais Consultancy, you decide to experiment by applying the principles of ABC to the four products currently made and sold by your company. Details of the four products and relevant information are given below for one period:

Product	A	B	C	D
Units produced & sold	200	160	120	240
Costs per unit	$	$	$	$
Direct material	60	75	45	90
Direct labour	52	30	21	28
Machine hrs (per unit)	8	6	4	5

The four products are similar and are usually produced in batches of 40 units and sold in batches of 20 units.

The production overhead is currently absorbed by using a machine hour rate, and the total of production overhead for the period has been analysed as follows:

Activity Cost Pool	$ **Cost**
Machine Processing	15400
Set up costs	20200
Order Handling	9600

Inspection/quality control	4800
Material handling and dispatch	10000

You have ascertained that the 'cost drivers' to be used are as listed below for the overhead costs shown:

Cost	Cost driver
Set up cost	Number of production runs
Material Handling	Requisitions raised
Inspection/quality control	Number of production runs
Order Processing	Order executed
Machine Processing	Machine hours

The number of requisitions raised on the stores was 40 for each product.

Required:

a). To calculate the total costs and unit cost for each product if all overhead costs are absorbed on a machine hour basis. **[5 marks]**

b). To calculate the total costs and unit cost for each product, using the activity based costing. **[10 marks]**

QUESTION 4

a) Handizivi has provided you with the following information, concerning his costs and revenue.

Sales revenue	$200000
Variable costs	$100000
Fixed costs	$ 20000

He asked you Vanoziva to calculate the following for him:

i). Break-even sales in value **[2 marks]**
ii). Break-even sales in volume **[2 marks]**
iii). The contribution sales ratio **[2 marks]**
iv). The margin of safety in value **[2 marks]**
v). The margin of safety ratio **[2 marks]**
vi).The sales volume to required to increase profits to $120000 **[2 mark]**

QUESTION 5

a). Pass Well manufacturers starts processing on 1 October 2014. In the month of October he starts work on 20000 units of production. At the end of October there are 1500 units still in process and it is estimated that work in

process is only one-third complete as regards labour. All materials have been input to the process. The costs for the period are:

Materials	$10 000
Labour	$ 9 500
Total	$19500

Calculate :

i). Total equivalent units [4 marks]
ii) Cost per equivalent unit [1 marks]
iii). Total cost for the period. [2 marks]

b). Read Well firm incurred the following joint costs, to produce joint products X.Y.Z

		$
Direct Material costs		17000
Direct Labour costs	13000	
Production Overhead costs		10000
Total joint costs		40000

The output from the joint production process for one month were as follows:

Joint Product	X	4500kg
	Y	3000kg
	Z	2500kg

The products do not have a market at the split-off point. They can be processed into more refined products as follows:

Joint Product	Further Processing costs	Refined Product	Market Price
Joint Product X	$9 000	XX	$6
Y	$4 500	YY	$6
Z	$7 500	ZZ	$12

You are required to:

i). Apportion the joint costs in the ratio of net realisable values at split-off point. **[3 marks]**
ii). Prepare columnar income statement for the refined products on the assumption that ninety percent of production is sold**.** **[10 marks]**

END OF PAPER