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-SEPT-OCT 2014 [HARARE PARALLEL]**

**LECTURER** **MR I. RARAMI**

**TIME:** **3 HOURS**

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## *INSTRUCTIONS*

Answer all four (4) 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.

*Answer all questions in Answer Books provided*

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**QUESTION 1**

The following is the data for Rufu Rufu for the six months to 31 June 2014, that relates to the production output and associated production overhead cost.

| **Month** | **Units** | **Production Costs** |
|---|---|---|
| January | 400 | 1050 |
| February | 600 | 1700 |
| March | 550 | 1600 |
| April | 800 | 2100 |
| May | 750 | 2000 |
| June | 900 | 2300 |

**Required:**

a). Calculate using the High –Low method
i). The variable production overhead cost per unite **[2 marks]** ii). The total fixed costs **[2 marks]**

b). Calculate using the simple linear regression analysis method.
i). The variable production overhead cost per unit. **[4 marks]**
ii). The total fixed costs **[4 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]**

e). The following data relate to department A for the latest period of Nice Juice Products Ltd, the producers of Mauyu Ice Lolo Juice.

| | |
|---|---|
| Budgeted overheads | $349780 |
| Budgeted machine hours | 87445 |
| Actual overheads | $437225 |
| Actual machine hours | 72785 |

**Calculate:**

i). The predetermined overhead absorption rate **[2 marks]**
ii). The overhead absorbed by actual activity **[2 marks]**
iii). The under/over absorbed overheads **[2 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 for each product if all overhead costs are absorbed on a machine hour basis. **[5 marks]**

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

c). To calculate and list the unit product costs from figures in (a) and (b) above. **[4 marks].**

**QUESTION 4**

a**).** Good & Sons (Pvt) Ltd has produced the following production and sales data for the past 3 months:

| | **August** | **September** | **October** |
|---|---|---|---|
| Output (units) | 30000 | 33000 | 50000 |
| Sales (units) | 25000 | 32000 | 40000 |

Unit selling prices and variable production overheads are $20 and $8 respectively. Fixed production overheads and fixed selling and administration overheads amount to $300000 and $210000 respectively.

**Required:**

Draw up profit statements for the three months on the absorption costing basis. **[8 marks]**

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 marks]**

b).State four advantages and four disadvantages of budgetary planning and control. **[4 marks]**

c). Zero Base Budgeting is a method of budgeting from a zero base, and justifying every item of expenditure in the budget. Mangers

using zero base budgeting are required to follow certain steps in preparing the budget.
State the steps followed when preparing the (Z.B.B) Zero Base Budget.

**[6 marks]**

**END OF PAPER**