



National University of Science and Technology

FACULTY OF COMMERCE

DEPARTMENT OF ACCOUNTING

SECOND SEMESTER EXAMINATION: 2013

DATE: DECEMBER 2013

**SUBJECT: MANAGEMENT AND COST ACCOUNTING
CAC 2105**

TIME ALLOWED: THREE (3) HOURS

MARKS: 100

INSTRUCTION TO THE CANDIDATES

1. Answer **all** questions
2. Begin each Full question on a new page

INFORMATION FOR CANDIDATES

1. All workings should be shown
2. All answers should be presented in good style

Question 1 [25 marks]

Revamped Ltd manufactures a variety of products. One of the products modified DVDs is produced in a specially equipped factory in which no other production takes place. The directors of Revamped Ltd are now formulating the company's production plan for 2014 and wish to estimate the costs of manufacturing the modified DVDs. Figures for the last six months are as follows

Month	Units	Cost (\$)
January	400	1 050
February	600	1 700
March	550	1 600
April	800	2 100
May	750	2 000
June	900	2 300

Required u

- (a)** Using the following methods calculate the fixed and the variable cost elements
 - (i)** High-low method
 - (ii)** Regression analysis
- (b)** Discuss the advantages and the limitations of linear regression analysis for the estimation of cost volume relationships
- (c)** Calculate the correlation coefficient and what does this answer signify
- (d)** Calculate the coefficient of determination and interpret it.

Question 2 [20 marks]

ZAWA Company expects annual demand for product X to be 255 380 units .Product X has a selling price of \$19 per unit and is purchased for \$11per unit from a supplier. ZAWA places an order for 50 000 units of product X at regular intervals throughout the year. Because the demand for product X is to some degree uncertain ZAWA maintains a safety (buffer) stock of product X which is sufficient to meet demand for 28 working days. The cost of placing an order is \$25 and the storage cost for product X is 10 cents per unit per year. ZAWA uses a working year consisting of 365 days.

Required

- (a) Calculate the annual cost of the current ordering policy [4]
- (b) Calculate the annual saving if the economic order quantity model is used to determine an optimal ordering policy [4]
- (c) Critically discuss the limitations of the economic order quantity model as a way of managing stock [4]
- (d) Discuss the advantages and disadvantages of using just in time stock management method. [8]

Question 3 [30 marks]

DC Ltd is an engineering company which uses job costing to attribute costs to individual products and services provided to its customers. It has commenced the preparation of its fixed production overhead cost budget for the next financial year and has identified the following costs:

	\$
Machining	600 000
Assembly	250 000
Finishing	150 000
Stores	100 000
Maintenance	<u>80 000</u>
	<u>1 180 000</u>

The stores and maintenance departments are service departments. An analysis of the services they provide indicates that their costs should be apportioned accordingly:

	Machining	Assembly	Finishing	Stores	Maintenance
Stores	40%	30%	20%	-	10%
Maintenance	55%	20%	20%	5%	-

The number of machine and labour hours budgeted for the next financial year is

	Machining	Assembly	Finishing
Machine hours	50 000	4 000	5 000
Labour hours	10 000	30 000	20 000

Required

(a) Calculate appropriate overhead absorption rates for each department for the next financial year [9]

(b) Prepare a quotation for job number 36 which is to be commenced early in the next financial year assuming that it has :

Direct materials	\$2 400
Direct labour	\$1 500

And requires

	Machine hours	labour hours
Machining department	45	10
Assembly department	5	15
Finishing department	4	12

And that profit is 20% of selling price

- (c) Assume that in the next financial year actual fixed overhead cost of the assembly department totals \$300 000 and that the actual machine hours were 4 200 and actual labour hours were 30 700
Prepare the fixed production control account for the assembly department showing clearly the causes of any over or under –absorption. [5]
- (d) Describe the likely stages involved in the design and operation of an ABC system. [5]
- (e) Explain how activity based costing would be used in organisations like DC Ltd. [6]

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$$a = \frac{\sum y}{n} - \frac{b \sum x}{n}$$

$$b = \frac{n \sum xy - \sum x \sum y}{n \sum x^2 - (\sum x)^2}$$

$$r = \frac{n \sum xy - \sum x \sum y}{\sqrt{[n \sum x^2 - (\sum x)^2][n \sum y^2 - (\sum y)^2]}}$$