



# National University of Science and Technology

## FACULTY OF COMMERCE

### DEPARTMENT OF ACCOUNTING

#### SECOND SEMESTER EXAMINATION: 2013

DATE: MAY 2013

SUBJECT: ACCOUNTING 2B: CAC 2206

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]

Callaway Ltd makes aluminium junction boxes for the electrical industry. It makes the boxes in three different sizes small, medium and large. The following details are taken from next quarter's budget

	<b>Large</b>	<b>Medium</b>	<b>Small</b>
Sales volume (units)	4 000	5 000	3 500
<b>Direct labour</b>			
Fitters and turners (hours/unit)	1.25	0.90	0.80
Assemblers and packers (hours/unit)	0.40	0.25	0.20
<b>Direct materials</b>			
Aluminium strips per unit	2.5	1.0	0.5
Packaging materials (metres)	1.25	0.75	0.5
<b>Stocks</b>			
Finished goods opening stock (units)	300	400	200
Finished goods closing stock (units)	400	300	150

#### Additional information

- (i) Rates of pay for fitters are turners and assemblers /packers are \$1 0.00 hour and \$6.00 per hour respectively.
- (ii) Aluminium strips cost \$3 each and packaging is \$1 per metre
- (iii) Callaway plans to have opening material stocks of 220 aluminium strips and 80 metres of packaging.
- (iv) The closing material stocks are 150 aluminium strips and 50 metres of packaging.
- (v) The quarter's fixed production overheads of \$31 700 are absorbed to product lines on a direct labour hour basis

#### Required

##### Prepare the following:

- (a) The production budget for the quarter [4]
- (b) The unit production cost of each type of junction box [8]
- (c) The material usage budget [4]
- (d) The material purchases budget (quantities and value) [4]
- (e) The direct labour budget in hours and value [5]

## Question 2 [25 marks]

A large local government authority places orders for various stationery items at quarterly intervals. The following information relates to stock item B22:

Annual usage quantity 5 000 boxes  
Minimum order quantity 500 boxes  
Cost per box \$2

- (i) Usage of material is on a regular basis and on average, half of the amount purchased is held in inventory.
- (ii) The cost of storage is considered to be 25% of the inventory value.
- (iii) The average cost of placing an order is estimated at \$12.50

The Director of the authority has asked you to review the present situation and to consider possible ways of effecting cost savings.

### Required

- (a) Tabulate the costs of storage and ordering item B22 for each level of orders from four to twelve placed per year. [16]
- (b) Produce a formula to calculate the order level which would minimize these Costs, Your answer should explain each constituent part of the formula and their relationships and calculate the Economic order using this formula [2]
- (c) Calculate the percentage saving on the annual cost which could be made by using the economic order quantity system. [5]
- (d) Suggest **two** other approaches which could be introduced in order to reduce the present cost of storage and ordering of stationery. [2]

## Question 3 [25 marks]

High-Tec Ltd manufactures and sells four products arms, brackets, clips and rings. This year for the first time it is operating an activity based costing system in parallel with its long standing absorption costing system (which absorbs overheads on machine hour basis). The planned production activity cost pools and cost drivers activity levels for all the output for the year is as follows.

Activity	cost pools	activity level
Purchasing materials	41 500	1 000 purchase orders
Storing materials	41 600	650 issue notes
Setting up machinery	26 400	200 set ups
Running machinery	<u>73 000</u>	7 300 machine hours
	<u>\$ 182 500</u>	

An analysis of actual annual production output for two of the products is as follows:

	Arms	Brackets
Units produced	1 000	500
Purchase orders	190	325
Stores issue notes	105	200
Set ups	35	60
Machine hours	2 600	1 275
Direct materials	\$8 250	\$3 750
Direct labour	\$46 000	\$7 600

**Required**

- (a) Calculate the production cost per unit for arms and brackets using machine hour overhead absorption rate [6]
- (b) Describe the likely stages involved in the design and operation of an ABC system. [5]
- (c) Calculate the production cost per unit for arms and brackets using the activity based costing system. [11]
- (d) Compare your findings in (a) and (b) and comment on them [3]

**Question 4 [25 marks]**

Survival Ltd is a manufacturing business with several production departments. The manager for the machining department Mr Know-all submitted the following figures for the firm's annual budget for his department

Units produced (normal production level)	64 000
	\$
Raw materials	294 400
Direct labour	236 800
Power	38 400
Repairs and maintenance (25% variable at this level of budgeted cost)	51 200
Insurance	1 300
Heating and Lighting	1 250
Indirect wages (15% variable at this level of budgeted cost)	<u>64 000</u>
	<u>687 350</u>
Total capacity for machining department	80 000

Actual Production for the period is 68 000 units and costs are:

	\$
Materials	310 750

Labour	249 100
Power	39 800
Repairs and maintenance	53 050
Insurance	1 350
Heating and Lighting	1 200
Indirect wages	<u>65 250</u>
Total cost	<u>720 500</u>

Mr Know-all is being criticised for overspending \$33 150 compared with his normal budget. It is appreciated that he made a saving on heating and lighting but concern is being expressed over the spending on materials and labour. Mr Know-all feels he has been able to control the department's costs efficiently.

**Required**

- (a) Prepare a flexible budget for 70%,75% and 85% of production capacity [5]
- (b) Calculate any savings or overspending by Know all's department and comment on its efficiency [5]
- (c) Make a recommendation on the most significant variance for investigation and suggest two possible causes to investigate [3]
- (d) Discuss for management purposes why budgets should be flexed [2]

**END OF EXAMINATION PAPER**