



National University of Science and Technology

FACULTY OF COMMERCE

DEPARTMENT OF ACCOUNTING

FIRST SEMESTER SUPPLEMENTARY EXAMINATION: 2014

DATE: 2014

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

TIME ALLOWED: THREE (3) HOURS

MARKS: 100

INSTRUCTIONS 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 [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

[5]

- (c) Assume that in the next financial year actual fixed overhead cost of the assembly department totals \$300 000 ,and 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]

Question 2 [20 marks]

ZAWA Ltd 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 Ltd 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 Ltd 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 Ltd 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 [25 marks]

PART A

A factory manufactures three components A, B and C. During week 26 the following was recorded:

Labour grade	Number of employees	Rate per hour \$	Individual hours worked
i.	6	4.00	40
ii.	18	3.20	42
iii.	4	2.80	40
iv.	1	1.60	44

Output and standard times during the same week were as follows:

Component	output	Standard minutes (each)
A	444	30
B	900	54
C	480	66

The normal working week is 38 hours. Overtime is paid at a premium of 50% of the normal hourly rate. A group incentive scheme is in operation. The time saved is expressed as a percentage of hours worked and is shared between the group as a proportion of the hours worked by each grade. The rate paid is 75% of the normal hourly rate.

Required

Calculate the total payroll showing the **basic pay, overtime premium and bonus pay** as separate totals for each grade of labour. [10]

PART B

The following information relates to two hospitals for the year ended 31 December 2012

	Central	St Johns
Number of in patients	15 400	710
Average stay per in- patient	10 days	156 days
Total number of out- patient attendances	130 000	3 500
Number of available beds	510	320
Average number of beds occupied	402	307

Cost analysis

	In Patients \$	out Patients \$	In Patients \$	out Patients \$
Patient care services				
Direct treatment services and supplies (nursing staff)	6 213 900	1 076 400	1 793 204	70 490
Medical supporting services:				
Diagnostic (e.g. pathology)	480 480	312 000	22 152	20 650
Other services (e.g. therapy)	237 160	288 600	77 532	27 790
General services				
Patient related (e.g. catering)	634 480	15 600	399 843	7 700
General (e.g. administration)	2 196 760	947 700	1 412 900	56 700

Required

- (a) Prepare a statement showing the following for each hospital
- (i) Cost per in- patient day [4]
 - (ii) Cost per out-patient attendance [4]
- (b) Calculate for each hospital the bed occupation percentage [2]
- (c) Comment briefly on your findings on (a) and (b) above [5]

Question 4 [25 marks]

The manufacture of one of the products of A Ltd requires three separate processes. In the last of the three processes, costs, production and stock for the month just ended were:

- (i)** Transfers from Process 2: 180 000 units at a cost of \$394 200
- (ii)** Process 3 costs: materials \$110 520, conversion costs \$76 506
- (iii)** Work in progress at the beginning of the month :20 000 units at a cost of \$55 160 (based on FIFO pricing method). Units were 70% complete for materials and 40% for conversion costs
- (iv)** Work in process at the end of the month: 18 000 units which were 90% complete for materials and 70 % complete for conversion costs.
- (v)** Product is inspected when complete. Normally no losses are expected but during the month 60 units were rejected and sold for \$1.50 per unit

Required

- (a)** Prepare Process 3 account for the month just ended [15]
- (b)** Explain how and why your calculations would be affected if the 60 units lost were treated as normal losses. [5]
- (c)** Explain how your calculations would be affected by the use of weighted average pricing instead of FIFO [5]

END OF EXAMINATION PAPER