National University of Science and Technology

FACULTY OF COMMERCE

DEPARTMENT OF ACCOUNTING

SUPPLEMENTARY EXAMINATION PAPER: 2012/2013

DATE:	**SEPTEMBER 2013**
SUBJECT:	**MANAGEMENT AND COST ACCOUNTING IB: CAC 2205**
TIME ALLOWED:	**THREE (3) HOURS**
MARKS:	**100**

INSTRUCTIONS TO CANDIDATES

1. Answer **ALL** questions
2. Use the examination book provided
3. Use black or blue pen
4. Begin each question on a new page
5. Submit all answer books and

Question 1 (25 marks)

Harvey Ltd produces a single product, Product DG, and is preparing budgets for the next three-month period, July to September. The current cost data for Product DG is as follows:

		$
Direct Material X	1.5kg at 3·50 per kg	5·25
Direct Material P	2.0kg at 4·50 per kg	9·00
Direct labour 12minutes at	$8·00 per hour	1·60
Variable production overhead	$1.00 per unit	1·00
Fixed production overhead	$3.00 per direct labour hour	0·60
		17·45

Harvey Ltd experiences seasonal changes in sales volumes, and forecast sales for the next four months are expected to be as follows:

Month	**July**	**August**	**September**	**October**
Sales (units)	30,000	35,000	60,000	20,000

It has been decided that opening stocks of finished goods in August and September must be 20% of the expected sales for the coming month. Closing stocks of finished goods in September must be 10% of the expected sales in October. Stocks of finished goods at the start of July are expected to be 4,000 units. Opening stocks of finished goods in July are valued at $69,800.

There will be 30,000 kg of Material X and 40,400 kg of Material P in stock at the start of July. These stocks will be bought in June at the current prices per kilogram for each material. Further supplies of Material X and Material P will need to be purchased for higher prices of $3·80 per kg for Material X and $4·80 per kg for Material P due to supplier price increases. Opening stocks of each material will remain at the same level as at the start of July.

In any given month, any hours worked in excess of 8,000 hours are paid at an overtime rate of $12·00 per hour.

Harvey Ltd operates a FIFO (first in, first out) stock valuation system.

Required:

(a) Prepare the following budgets for July, August and September and in total for the three-month period:

i. Production budget, in units; **(3 marks)**
ii. Material usage budget, in kilograms; **(3 marks)**
iii. Production budget, in money terms. **(3 marks)**

(b) Calculate the value of the closing stocks of finished goods at the end of the three-month period, and the value of cost of sales for the period.

(6 marks)

(c) Discuss the concept activity based budget and the limitations of this type of budget.

(10 marks)

<u>Question 2 (25 marks)</u>

Paradise Inc is in the business of manufacturing steel furniture. It is small scale business. The management of Paradise is considering undertaking a one-off contract which, if accepted, needs to be executed after three months.

Bank overdraft of $8,000 would be required for the project duration of three months as finance. The overdraft would be repaid at the end of the period. Paradise uses a cost of capital of 20% to appraise projects. The bank's overdraft rate is 18%. In order to determine the profitability of the received order, the management asked their recently joined accountant, Jim, to prepare a cost sheet specifying relevant costs for this special order.

Jim submitted a report comprising a cost sheet and other additional information to the management.
Jim has mentioned in his report that:

1. The stock of inventory worth 4,000 kg is no longer in use and can be sold as scrap in the market at $4.20 per kg. In the received order, out of this unused inventory, 3,000 kg can be utilised. The replacement cost of total required materials of 3,000 kg would be $13,350.
2. For this special order, transfer of four skilled labourers from another department would be required for three months. They all are fully occupied in their department, and if transferred for this special order, the work already allotted to them would have to be outsourced. The cost of outsourcing their work for that determined period would be $12,800. If the labour work related to the special order is outsourced, the associated cost would amount to $12,520.
3. The book value of machinery which will be utilised for the special job is $46,000. The rate of depreciation on the machinery is 8% per annum. It is expected that additional machine maintenance costs of $200 will be incurred.
4. Machinery overheads are charged at $3 per hour. It is estimated that 2,400 hours will be required for the special order. The machine has 1,600 hours of available capacity. The further 800 hours that are required will have to be taken from the existing job. This arrangement will result in a loss of contribution of $2 per hour. 86: Decision-Making Techniques © GTG
5. Administration overheads include apportionment and incremental costs of $1,200 and $400 respectively.
6. Supervisor's salary includes $3,200 regular pay and $1,400 additional pay for working on the special order. For the three months, the supervisor would not be working on his routine tasks and hence will not get his regular incentives of $1,000.

Cost sheet

	$
Materials	13,600
Labour	11,400
Prime cost	**25,000**
Depreciation on machinery	920

Overheads of machinery	7,200
Factory costs	**33,120**
Administration overheads	1,600
Supervisor's salary	4,600
Cost for special order	**39,320**

The management has heard that for special orders such as this, relevant costing should be used that also incorporates opportunity costs. They have approached you as a cost accountant, to create a revised costing schedule based on relevant costing principles.

Required:

Prepare a revised costing schedule for the special project based on relevant costing**.**

(25 Marks)

Note: your answer should be supported by necessary workings.

Question 3 (25 marks)

Madziva Ltd manufactures and sells Walkmans at $15 per unit.
In a period, if it produces and sells 8000 Walkmans, it incurs a loss of $5 per Walkman.
If the volume is raised to 20,000 Walkmans, it earns a profit of $4 per Walkman.

Required:
(a) Calculate the amount of margin of safety for both the situations. **(13 Marks)**

(b) What will be the sale volume of Walkmans for Madziva Ltd to achieve the target profit of

$7 per Walkman in the next financial year, i.e. 2011? **(12 Marks)**

Question 4 (25 marks)

Taba Ltd is a shoe manufacturer. In the last two years, the company has not introduced a new variety of shoes. It has $100,000 surplus cash for which management is exploring introducing three new product lines, each with different levels of price, profitability and sales volumes. Market research has been conducted to estimate customer demand for each type of shoe. Each type of shoe requires an initial investment of $50,000, so the directors are faced with a decision to choose two out of three options.
The three new shoe products have been named TAA, BAA and DAA. TAA has been estimated as having a 90 per cent take-up from customers as it is a variation of an existing model which has been very successful. BAA has a take-up estimate of 85 per cent; however, DAA has been estimated at only 55 per cent as it is a new design that has been targeted as a diversion away from market trends, as a signature item. Taba Ltd's marketing department has given the unit sales estimations along with the sales price set for each new product.

The finance department has provided the cost estimates of each new shoe to complete the unit profit analysis.

A summary of the data is as follows:

Product	**Take Up (%)**	**No. of Units**	**Sales Value ($)**	**Cost ($)**	**Profit ($)**
TAA	90%	10,000	395,000	158,000	237,000
BAA	85%	10,000	445,000	190,000	255,000
DAA	55%	7,500	595,000	190,000	405,000

In case the company decides not to introduce any new product, management can park the surplus cash in a liquid financial instrument and wait for alternative investment opportunities. Management is also worried that the brand of the company may lose popularity due to lack of innovativeness in introduction of new products in the market.

Required:

Construct a decision tree showing various options for enabling management to arrive at a decision and explain each option in detail. **(25 Marks)**

END OF EXAMINATION PAPER