

# THE PUBLIC ACCOUNTANTS EXAMINATIONS BOARD

*A Committee of the Council of ICPAU*

## INTRODUCTION TO MANAGEMENT ACCOUNTING – PAPER 7

**DECEMBER 2000**

### INSTRUCTIONS TO CANDIDATES

1. Time allowed: **3 hours**
2. Attempt all questions in Section **A**, **one** question in Section **B** and any **three** in Section **C**.
3. Section **A** has **twenty** compulsory questions each carrying 1 mark.
4. Section **B** has **two** questions and only **one** is to be attempted. Each question carries 20 marks.
5. Section **C** has **four** questions and only **three** questions are to be attempted. Each question carries 20 marks.

## **SECTION A**

### **Question 1**

- i) In this method, the selling price of a product is arrived at by adding estimated administration, selling distribution overheads and desired profit to the factory cost of the product:
  - a) Marginal cost method.
  - b) Full cost method.
  - c) Standard cost method.
  - d) Conversion cost method.
  
- ii) Which one of the following statements is false?
  - a) Cash flows from a project can be worked out only on the basis of certain probabilities.
  - b) No additional working capital will be required in case of an existing project.
  - c) Discounted cash flow technique takes into account the time value of money.
  - d) The Internal Rate of Return and Net Present value are synonymous terms.
  
- iii) Which one of the following statements is true?
  - a) Profit Volume Ratio indicates the relationship between profit and sales.
  - b) Increase in selling price will have no effect on margin of safety.
  - c) A high margin of safety shows that the actual sales are much more than break-even sales.
  - d) Semi-variable costs are ignored in marginal costing.
  
- iv) Costs which are pertinent for decision making are termed as:-
  - a) Differential costs.
  - b) Past costs.
  - c) Relevant costs.
  - d) Marginal costs.
  
- v) The following are significant difficulties encountered in stock valuation except:-
  - a) The valuation of a stock item.
  - b) Charging units of stock to cost of production or cost of sales.
  - c) The cost of a unit of stock.
  - d) Remuneration of stock valuers.

- vi) Which of the following is not true about a system of integrated accounts?
- a) The financial and cost accounts are combined in one set of ledger accounts.
  - b) There is need to operate cost ledger control accounts.
  - c) There is no need to reconcile the respective cost and financial profits.
  - d) There is no need to operate cost ledger control accounts.
- vii) Which one of the following is not a feature of contract costing?
- a) Work is not undertaken to customers' special requirements.
  - b) The method of costing is similar to job costing.
  - c) The work is frequently constructional in nature.
  - d) A formal contract is made between the customer and supplier.
- viii) In spreadsheets, the contents of the cell can be any of the following except:-
- a) A text.
  - b) Values.
  - c) Formulae.
  - d) A menu.
- ix) An integrated software refers to:-
- a) An off-the-shelf program that can be used for processing of a general type or sometimes a variety of specific uses.
  - b) Software that controls the basic operations of a computer system.
  - c) A program or package of programs that perform a variety of different processing operations.
  - d) Physical devices and components that make up a computer system.
- x) Which of the following is true?
- a) Internal Rate of Return determines the maximum rate of interest that a firm can afford to pay on the borrowings of a particular project.
  - b) Tax concessions have no role to play in estimating the cash flows from a project.
  - c) Depreciation is not considered while calculating the return on a project according to the Accounting Rate of Return method.
  - d) Payback method takes into account the cash flows after the payback period.

***The following information relates to questions (xi) – (xv).***

Millennium Motors Ltd. has a fleet of company cars for its sales representatives. Running costs have been estimated as follows:-

1. Cars cost Shs. 12m when new and have a guaranteed trade in value of Shs.6m at the end of 2 years. Depreciation is charged on a straight line basis.
2. Petrol and oil cost Shs.5,000 per km.
3. Routine maintenance costs Shs.200,000 per car in the first year and Shs.450,000 in the second year.
4. Repairs average Shs.400,000 per car over two years and are thought to vary with Kms. The average car travels 25,000 km per annum.

xi) What is the depreciation charge for a year?

- a) Shs. 4m.
- b) Shs. 3m.
- c) Shs. 1m.
- d) Shs. 2m.

xii) Which of the above running costs are fixed?

- a) Depreciation, Petrol and Oil Cost, and Repairs.
- b) Depreciation, Petrol and Oil Cost, and Routine Maintenance.
- c) Depreciation and Routine maintenance.
- d) Petrol and Oil, and Routine maintenance.

xiii) What is the value of fixed costs per annum?

- a) Shs. 3,005,000.
- b) Shs. 3,325,000.
- c) Shs. 3,000,000.
- d) Shs. 4,000,000.

xiv) Which of the above costs are variable?

- a) Depreciation and Repairs.
- b) Repairs and Routine Maintenance.
- c) Repairs, and Petrol and Oil.
- d) Petrol and Oil, and depreciation.

- xv) What is the value of variable costs per annum?
- a) Shs. 5,016.
  - b) Shs. 5,000.
  - c) Shs. 400,000.
  - d) Shs. 600,000.
- xvi) The following are the steps in Rollback Analysis which evaluates the expected value of each decision option except:-
- a) Work from right to left, to the particular decision under consideration.
  - b) Label each decision point and outcome point.
  - c) Work from left to right and calculate expected value at each outcome point.
  - d) Work from right to left and calculate expected values at each outcome point.
- xvii) Which one of the following is a selling and distribution cost?
- a) Insurance of the company's premises.
  - b) Salary of a security guard in the raw material warehouse.
  - c) Holiday pay of machine operators.
  - d) Motor vehicle licences for delivery vans.
- xviii) An organisation using ideal standards for standard costing purposes should expect that:-
- a) Employees will be strongly motivated to work harder and achieve the standards.
  - b) Most variances will be unfavourable.
  - c) A large incentive bonus will have to be paid.
  - d) Most variances will be favourable.
- xix) Which one of the following statements is correct?
- a) Fixing standards is the work of industrial engineers or the production people and not of a cost accountant.
  - b) Variance analysis helps management in taking day-to-day decisions such as make or buy.
  - c) Standard costs are computed after the product is manufactured.
  - d) Budgeting and standard costing are the same.

- xx) Cost reduction involves:-
- a) Keeping costs within limits.
  - b) Reduction in cost on permanent basis.
  - c) Reduction in cost on temporary basis.
  - d) Reduction in cost only done by top management.

## SECTION B

### Question 2:

- a) State and explain any four features of process costing. **4 marks**
- b) The following information relates to process 3 of a three-stage production process for the month of December 1999.

Opening Stock

1,000 units complete as to:

	%	Shs.(000's)
Materials from process 2	100	8,800
Added materials	90	2,300
Labour	80	1,080
Production overheads	80	<u>1,620</u>
		<u>13,800</u>

In December 1999, a further 1,800 units were transferred from process 2 at a valuation of Shs.54,000,000. Added materials amounted to Shs.13,200,000 and direct labour to Shs. 6,540,000. Production overhead is absorbed at the rate of 15% of direct labour cost.

Closing stock at 31 December 1999 amounted to 900 units complete as to:

Process 2 materials	100%
Added materials	60%
Labour and overheads	50%

**Required:**

Using FIFO valuation principles, prepare:-

- i) Statement of equivalent units. **4 marks**
  - ii) Statement of cost. **2 marks**
  - iii) Statement of evaluation. **6 marks**
  - iv) Process 3 account **4 marks**
- Total 20 marks**

**Question 3:**

- a) Distinguish between Absorption costing and Marginal costing. **4 marks**
- b) What is meant by the term contribution? **2 marks**
- c) Mpala Pharmaceuticals Ltd. manufactures and markets three products: Panadol, Septrin and Cough Syrup in varying proportions during a year. Based upon past experience and future market expectations, the Management Accountant of Mpala Pharmaceuticals Ltd has provided the following information for the next year:

Product	Price	Variable cost	Possible Sales	
	per unit	per unit	Mix 1	Mix 2
	Shs.	Shs.	(Shs.)	(Shs)
Panadol	3,000	1,200	6,000,000	3,000,000
Septrin	4,000	2,000	3,000,000	2,000,000
Cough syrup	2,500	2,500	1,000,000	5,000,000

The fixed costs during the coming year are estimated at Shs.2,640,000.

**Required:**

- i) Using Marginal Costing, prepare an Income Statement for Mpala Pharmaceuticals Ltd. **12 marks**
- ii) Which sales-mix would you adopt and why? **2 marks**

**Total 20 marks**

## SECTION C

### Question 4:

- a) Define the term budget. **2 marks**
- b) Explain what is meant by a budgetary control system. **2 marks**
- c) Outline the objectives of a budgetary control system in an organisation. **6 marks**
- d) Define a spreadsheet: Outline some of the management accounting applications of spreadsheets. **6 marks**
- e) Explain a principal budget factor and how it affects the preparation of the rest of the budget. **4 marks**

**Total 20 marks**

### Question 5:

You are the Cost Accountant of Shem Aluminium Ltd, an industrial concern. The Financial Controller has given you the following budgeted information regarding the four cost centres in the company.

	<b>Moulding Department Ushs(M)</b>	<b>Finishing Department Ushs(M)</b>	<b>Maintenance Department Ushs(M)</b>	<b>Canteen Ushs(M)</b>	<b>Total Ushs(M)</b>
Indirect labour	60	70	25	15	170
Consumables	12	16	3	10	41
Heating and Lighting					12
Rent and rates					18
Depreciation					30
Supervision					24
Power					<u>20</u>
					<u><b>315</b></u>

You are also given the following information:

	<b>Moulding Department</b>	<b>Finishing Department</b>	<b>Maintenance Department</b>	<b>Canteen</b>	<b>Total</b>
Floor space in sq.m	10,000	12,000	5,000	3,000	30,000
Book value of machinery (Shs.m)	150	120	20	10	300
Number of employees	40	30	10	-	80
Kilowatt hours	4,500	4,000	1,000	500	10,000

You have also been told the following:-

- a) The canteen staff are outside caterers.
- b) Moulding and Finishing are production cost centres while maintenance and canteen are service cost centres.



**Required:**

- a) Prepare an overhead cost statement showing the allocation of overheads and the apportionment of general overheads to the four cost centres, clearly showing the basis of apportionment.

**12 marks**

- b) Based on the fact that the maintenance department provides 4,000 service hours to moulding department, and 3000 service hours to Finishing department and 1000 service hours to the canteen, apportion the overheads of the two service departments using the algebraic method.

**8 marks**

**Total 20 marks**

**Question 6:**

- a) The following information is provided by Banda Industries for a fortnight in April 2000:-

**Material Mini:**

Stock on 1-4-2000 100 units at Shs. 5,000 per unit.

**Purchases:**

5-4-2000	300 units at Shs. 6,000 per unit
8-4-2000	500 units at Shs. 7,000 per unit
12-4-2000	600 units at Shs. 8,000 per unit

**Issues:**

6-4-2000	250 units
10-4-2000	400 units
14-4-2000	500 units

**Required:**

- i) Using FIFO method of pricing issues, calculate the value of materials consumed during the period.
- ii) Calculate the value of stock of materials on 15-4-2000

**9 marks**

**1 mark**

- b) The following data relates to a manufacturing company:-

Plant capacity: 400,000 units p.a.

Present utilisation: 40%

Actual for the year 1999 were:

Selling price Shs. 5,000 per unit.

Material cost Shs. 2,000 per unit.

Variable manufacturing cost Shs. 1,500 per unit.

Fixed costs Shs. 2,700,000..

In order to improve the capacity, the following proposals are considered:

Reduce selling price by 10%.

Spend an additional Shs.300,000 on sales promotion.

**Required:**

How many units should be made and sold in order to earn a profit of Shs.500,000 per annum?

**10 marks**

**Question 7:**

- a) If Shs. 80,000 is invested now to earn 10% interest for three years and 8% thereafter. What would be the size of the total investment at the end of five years?
- b) M/s. Gama & Co. Ltd gave us their proposed investments and indicated the following cash flows:-

**4 marks**

Investment	Initial outlay (Shs.000's)	Year End Cash flows		
		Year 1 (Shs.000's)	Year 2 (Shs.000's)	Year 3 (Shs.000's)
A	2,000	2,000	0	0
B	2,000	1,000	1,000	1,000
C	2,000	200	1,000	3,000
D	2,000	2,000	200	200
E	2,000	1,400	600	1,000
F	2,000	1,600	1,600	800

Hint: Present value of Shs. 1 due at the end of the year

1	0.909
2	0.826
3	0.751

**Required:**

Using a discount rate of 10%, Rank the Investment on the basis of Net Present Value.

**10 marks**

- c) Distinguish between Internal Rate of Return (IRR) and Net Present Value (NPV). Which one would you chose and why, for two projects competing for funds at the disposal of a firm?

**6 marks**

**Total 20 marks**