

THE PUBLIC ACCOUNTANTS EXAMINATIONS BOARD

A Committee of the Council of ICPAU

CPA (U) EXAMINATIONS

LEVEL TWO

INTRODUCTION TO MANAGEMENT ACCOUNTING – PAPER 7

MONDAY, 18 JUNE 2007

INSTRUCTIONS TO CANDIDATES

1. Time allowed: **3 hours**
2. Attempt all questions in Section **A**, **one** question in Section **B** and any **three** questions in Section **C**.
3. Section **A** has **twenty** compulsory multiple-choice 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.
6. Tables are provided on page 11.
7. Please read further instructions on the answer book.

SECTION A

Question 1

- (i) Which of the following activities best describes a cost driver?
 - (a) Any activity, which causes an increase in costs.
 - (b) A collection of costs associated with a particular activity.
 - (c) A cost that varies with production levels.
 - (d) Any factor which causes a change in the cost of an activity.
- (ii) Which of the following is not a principal budget factor?
 - (a) Cash.
 - (b) Sales demand.
 - (c) Machine capacity.
 - (d) Selling price.
- (iii) Which of the following is not a technique for inventory control?
 - (a) FIFO method.
 - (b) Just in Time (JIT).
 - (c) Economic Order Quantity (EOQ).
 - (d) Materials Requirement Planning (MRP).
- (iv) Which of the following is **NOT** a cause of labour variance?
 - (a) Higher rate of pay.
 - (b) Grading of labour.
 - (c) Wastage of materials by workers.
 - (d) Labour idle time.
- (v) Which of the following is **NOT** a qualitative factor that influences the make or buy decisions?
 - (a) Quality of goods supplied by supplier.
 - (b) Uninterrupted supply by supplier.
 - (c) Size of goods supplied by supplier.
 - (d) Adverse effects on labour relations.

Use the following data to answer questions (vi) - (x)

Shah Limited had the following information extracted from its management accounts for the period ended 31 December 2006:

Fixed costs for the period	Shs 60,000,000
Selling price	Shs 20,000 per unit
Variable cost	Shs 10,000 per unit
Existing sales	8,000 units
Relevant range of output	4,000 – 12,000 units

- (vi) Calculate the break-even point in units.
- (a) 6,000.
 - (b) 7,000.
 - (c) 10,000.
 - (d) 4,000.
- (vii) Calculate the P/V ratio.
- (a) 0.83.
 - (b) 1.25.
 - (c) 0.50.
 - (d) 1.67.
- (viii) Calculate the break-even point in Shillings.
- (a) Shs 72,000,000.
 - (b) Shs 48,000,000.
 - (c) Shs 36,000,000.
 - (d) Shs 120,000,000.
- (ix) If a profit of Shs 10 million is planned, how many units should be sold to make the plan possible?
- (a) 6,000.
 - (b) 7,000.
 - (c) 10,000.
 - (d) 4,000.
- (x) If expected sales amount to 10,000 units, calculate the margin of safety.
- (a) 25%.
 - (b) 40%.
 - (c) 50%.
 - (d) 14%.
- (xi) Which of the following is **NOT** a responsibility of a cost accountant?
- (a) Cost control.
 - (b) Inventory control.
 - (c) Budgeting.
 - (d) Sourcing for finance.

- (xii) Which of the following is **NOT** involved in the valuation of inventories?
- (a) Physical counting of inventory.
 - (b) Use of personnel for inventory counting other than those working in the store.
 - (c) Attaching value to inventory items based on the principle of the lower of cost and net realizable value.
 - (d) Receiving goods into store.
- (xiii) Which costing system is suitable where the customer has quoted a special specification of a task?
- (a) Job costing.
 - (b) Process costing.
 - (c) Batch costing.
 - (d) Standard costing.
- (xiv) Which cost accounting system separates the reporting of cost accounts from financial accounts?
- (a) Interlocking cost accounts.
 - (b) Cost ledger control accounts.
 - (c) Finished ledger control accounts.
 - (d) Integrated cost accounts.
- (xv) The term used to measure inventory at which a replenishment order should be made is referred to as:
- (a) economic order quantity.
 - (b) margin of safety.
 - (c) inventory order level.
 - (d) reorder level.
- (xvi) Which of the following is **NOT** a characteristic of spreadsheets?
- (a) Performance of mathematical expressions.
 - (b) Data is represented in rows and columns.
 - (c) Take into account qualitative factors.
 - (d) When writing an expression only one cell is affected.
- (xvii) Which of the following budgets adjusts to the changes in the different cost behaviours and changes in volumes of output?
- (a) Rolling budget.
 - (b) Moving budget.
 - (c) Flexible budget.
 - (d) Standard budget.

- (xviii) A standard based on existing working conditions is referred to as:
- (a) ideal standard.
 - (b) current standard.
 - (c) basic standard.
 - (d) attainable standard.
- (xix) In job costing, if rectification is regarded as a normal part of the work carried out in the department, the correct way of treating rectification costs is to:
- (a) add them to material costs.
 - (b) charge them as a direct cost to the job.
 - (c) treat them as production overheads.
 - (d) deduct them from production costs.
- (xx) Which of the following is **FALSE** about the split-off point?
- (a) Various products become identifiable.
 - (b) Subsequent to the split-off point, any costs incurred can be identified.
 - (c) Up to the split-off point all costs are joint costs.
 - (d) Subsequent costs after split-off pose costing problems.

SECTION B

Question 2

- (a) To what extent is coordination of budgets a role of a budget committee?
(6 marks)
- (b) Briefly identify the characteristics of the process costing method.
(5 marks)
- (c) Distinguish between sunk costs and opportunity cost.
(4 marks)
- (d) Explain the term “abnormal loss” in process costing and outline its probable causes.
(5 marks)

(Total 20 marks)

Question 3

- (a) Explain the motives of holding inventory.
(6 marks)
- (b) Explain the term “spreadsheets” and identify their functions.
(4 marks)

- (c) Outline the possible advantages for having a standard costing system.
(5 marks)
- (d) Briefly explain the term rolling budget and state its advantages.
(5 marks)
- (Total 20 marks)

SECTION C

Question 4

- (a) What are overheads?
(1 mark)
- (b) Kazana Manufacturers Ltd. manufacture three products: **X Y** and **Z**. Each product is started in the Machining Department and completed in the Assembly Department. It also has two service departments: a Canteen and Maintenance. Shown below are next year's budgeted overhead costs.

	Production Departments		Service Departments		Total
	Machining	Assembly	Canteen	Maintenance	
	Shs. '000'	Shs. '000'	Shs. '000'	Shs. '000'	Shs. '000'
Allocated Overheads	32,120	25,205	13,630	12,550	83,505
Depreciation & insurance of equipment					38,000
Rent, rates, heating and lighting					12,000
Other Overheads					10,000

The following additional information is available.

Book value of equipment	Shs 120 million	Shs 45 million	Shs 15 million	Shs 60 million	Shs 240 million
Floor space in sq. metres	3,600	2,400	1,800	3,000	10,800
Other overheads	30%	25%	10%	35%	100%
No. of employees	8	5	4	3	20
No. of maintenance hours.	40	50	10	15	115
Budgeted machine hours.	150	200			

At the end of the period, the actual machine hours in the Machining and Assembly departments were 100 and 50 respectively.

Overheads are transferred from service departments to production departments using simultaneous equations method.

Required:

- (i) Determine the total estimated overheads in each department. **(7 marks)**
 - (ii) Transfer service department costs to production departments. **(8 marks)**
 - (iii) Calculate the budgeted overhead absorption rates in each production department. **(2 marks)**
 - (iv) Calculate the overheads absorbed by the products in each production department. **(2 marks)**
- (Total 20 marks)**

Question 5

- (a) Define the term "budget". **(1 mark)**
- (b) Trumpet Ltd. had the following extracts from the balance sheet as at 31 December 2006.

Inventories	Shs '000'
Raw materials (600 metres @ Shs 1,000)	600
Finished goods (480 units @ Shs 55,000)	26,400

The Chief Executive Officer, in his communication of budget guidelines, hinted on the following:

- (i) Increase selling price per unit from the current Shs 65,000 to Shs 70,000 per unit.
- (ii) Allocate 3% of sales to R&D to keep abreast with technology and beat off competition.
- (iii) Each head of a functional unit or department to submit his / her sectional budget to the Budget Officer within two weeks.

The Sales Division has come up with the following estimates for sales:

Quarter	Estimated sales (Units)
1	2,500
2	2,800
3	1,700
4	3,000
1 (next year)	3,000

They have indicated that the selling price of Shs 70,000 will be acceptable to the market but advertising expenditure has to be increased to 5% of sales.

The Production Division has provided the following cost profile for the manufacture of each unit of the product:

	Shs '000'
Raw materials (10 metres @ Shs 1,000 per metre)	10
Direct labour (1½ hours @ Shs 20,000 per hour)	30
Variable overhead (50% direct labour)	<u>15</u>
Total variable costs	<u>55</u>

Fixed manufacturing overhead per quarter (including Shs 1,500,000 depreciation on plant and equipment per quarter). 2,400

They advise that:

- (i) Closing inventory of raw materials be 10% of the next quarter's requirements because suppliers are erratic.
- (ii) Closing inventory of raw materials in the 3rd quarter be the same figure as in the 4th quarter.
- (iii) Hold finished goods inventory equivalent to 20% of expected sales of the next quarter.

The purchasing unit advise that raw materials will cost Shs1,000 per meter.

Administrative salaries amounting to Shs 2,000,000 per quarter will be incurred.

Required:

Prepare the following budgets for the financial year commencing on 1 January 2007:

- (i) Sales budget. (2 marks)
 - (ii) Production budget. (4 marks)
 - (iii) Purchases budget. (6 marks)
 - (iv) Labour budget. (3 marks)
 - (v) Manufacturing overhead budget. (2 marks)
 - (vi) Selling and administrative expense budget. (3 marks)
- (Total 20 marks)**

Question 6

- (a) Distinguish between mutually exclusive and independent projects under investment appraisal and NPV.

(2 marks)

- (b)(i) Tingi Ltd. manufacture product Y whose costs per unit are as follows:

	Shs
Selling price	2,500
Variable costs of production	1,500
Fixed costs	250

A new machine is available which would cost Shs 45,000,000 but which could be used to make product Y for a variable cost of only Shs 1,250 per unit. Fixed costs, however, would increase by Shs 3,750,000 per annum as a direct result of purchasing the machine.

The machine would have an expected life of 4 years and a resale value after that time of Shs 5, 000,000.

Sales of product Y are estimated to be 75,000 units per annum. Tingi Ltd. expects to earn at least 12% per annum from its investments. Ignore taxation.

Required:

- (i) Using the net present value method of appraisal, advise whether Tingi Ltd. should purchase the machine or not.

(8 marks)

- (ii) If it is company policy to undertake projects that are expected to yield a return of 12% or more, using IRR ascertain whether this project is worthwhile.

(6 marks)

- (iii) Outline the comparison between NPV and IRR.

(4 marks)

(Total 20 marks)

Question 7

- (a) Explain the break-even model and state its assumptions.

(6 marks)

- (b) Detergent Manufacturers Ltd. produces and sells detergent OMNI at Shs 1,300 per gallon on the local market. The costs involved in the production of each gallon of detergent OMNI are as follows:

	Cost per gallon (Shs)
Direct material	500
Direct labour	300
Variable manufacturing overheads	150
Variable non manufacturing overheads	50
Fixed overhead	<u>100</u>
Total cost	1,100
Profit	<u>200</u>
Selling price	<u>1,300</u>

The company has the capacity to produce 20,000 gallons of detergent OMNI. For the quarter ended 31 December 2006, the company produced and sold 15,000 gallons to the local market. Pearl Hotels Ltd. have placed a special order of 4,000 gallons of the detergent at a price of Shs 1,100 per gallon. In addition, Pearl Hotels Ltd. would like the detergent to be branded with the hotel logo and this would cost an extra Shs 50 per gallon. All the labour force is on the payroll and paid monthly salaries.

Required:

- (i) Advise the company as to whether it should accept the special order.

(10 marks)

- (ii) Explain other qualitative factors that the company should consider before accepting the special order.

(4 marks)**(Total 20 marks)**

Table 1: PVIF- Present Value of Shs 1 Due at the End of n Periods

Period	9%	10%	11%	12%	13%	14%	15%	16%	18%	20%
1	0.917	0.909	0.901	0.893	0.885	0.877	0.870	0.862	0.847	0.833
2	0.842	0.826	0.812	0.797	0.783	0.769	0.756	0.743	0.718	0.694
3	0.772	0.751	0.731	0.712	0.693	0.675	0.658	0.641	0.609	0.579
4	0.708	0.683	0.659	0.636	0.613	0.592	0.572	0.552	0.516	0.482
5	0.650	0.621	0.593	0.567	0.543	0.519	0.497	0.476	0.437	0.402
6	0.596	0.564	0.535	0.507	0.480	0.456	0.432	0.410	0.370	0.335
7	0.547	0.513	0.482	0.452	0.425	0.400	0.376	0.354	0.314	0.279
8	0.502	0.467	0.434	0.404	0.376	0.351	0.327	0.305	0.266	0.233
9	0.460	0.424	0.391	0.361	0.333	0.308	0.284	0.263	0.225	0.194
10	0.422	0.386	0.352	0.322	0.295	0.270	0.247	0.227	0.191	0.162
11	0.388	0.350	0.317	0.287	0.261	0.237	0.215	0.195	0.162	0.135
12	0.356	0.319	0.286	0.257	0.231	0.208	0.187	0.168	0.137	0.112
13	0.326	0.290	0.258	0.229	0.204	0.182	0.163	0.145	0.116	0.093
14	0.299	0.263	0.232	0.205	0.181	0.160	0.141	0.125	0.099	0.078
15	0.275	0.239	0.209	0.183	0.160	0.140	0.123	0.108	0.084	0.065

TABLE 2: PVAF - Present Value of an Annuity of Shs 1 per Period for n Periods

Period	9%	10%	11%	12%	13%	14%	15%	16%	18%	20%
1	0.917	0.909	0.901	0.893	0.885	0.877	0.870	0.862	0.847	0.833
2	1.759	1.736	1.713	1.690	1.668	1.647	1.626	1.605	1.566	1.528
3	2.531	2.487	2.444	2.402	2.361	2.322	2.283	2.246	2.174	2.106
4	3.240	3.170	3.102	3.037	2.974	2.914	2.855	2.798	2.690	2.589
5	3.890	3.791	3.696	3.605	3.517	3.433	3.352	3.274	3.127	2.991
6	4.486	4.355	4.231	4.111	3.998	3.889	3.784	3.685	3.498	3.326
7	5.033	4.868	4.712	4.564	4.423	4.288	4.160	4.039	3.812	3.605
8	5.535	5.335	5.146	4.968	4.799	4.639	4.487	4.344	4.078	3.837
9	5.995	5.759	5.537	5.328	5.132	4.946	4.772	4.607	4.303	4.031
10	6.418	6.145	5.889	5.650	5.426	5.216	5.019	4.833	4.494	4.192
11	6.805	6.495	6.207	5.938	5.687	5.453	5.234	5.029	4.656	4.327
12	7.161	6.814	6.492	6.194	5.918	5.660	5.421	5.197	4.793	4.439
13	7.487	7.103	6.750	6.424	6.122	5.842	5.583	5.342	4.910	4.533
14	7.786	7.367	6.982	6.628	6.302	6.002	5.724	5.468	5.008	4.611
15	8.061	7.606	7.191	6.811	6.462	6.142	5.847	5.575	5.092	4.675