

THE PUBLIC ACCOUNTANTS EXAMINATIONS BOARD

A Committee of the Council of ICPAU

CPA (U) EXAMINATIONS

LEVEL ONE

MANAGEMENT ACCOUNTING AND FINANCE - PAPER 6

FRIDAY, 10 DECEMBER 2010

INSTRUCTIONS TO CANDIDATES

1. Time allowed: **3 hours 15 minutes**.

The first 15 minutes of this examination have been designated for reading time. You may not start to write your answer during this time.

2. Attempt all questions in Section **A**, any **three** questions in Section **B** and any **one** question in Section **C**.
3. Section **A** has **twenty** compulsory multiple-choice questions each carrying 1 mark.
4. Section **B** has **four** questions and only **three** are to be attempted. Each question carries 20 marks.
5. Section **C** has **two** questions and only **one** question is to be attempted. Each question carries 20 marks.
6. Tables are provided on page 12.
7. Please read further instructions on the answer book, before attempting any question.

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SECTION A

Question 1

- (i) A cost unit is:
 - (a) a measure of work output in a standard hour.
 - (b) a unit of product or service in relation to which costs are ascertained.
 - (c) the cost per unit of water consumed.
 - (d) the cost per hour of operating a machine.
- (ii) A record of quantity of materials in inventory for each stores item is:
 - (a) purchase order.
 - (b) goods received note.
 - (c) purchase requisition.
 - (d) bin card.
- (iii) Over absorption of overheads occurs when:
 - (a) absorbed overheads exceed actual overheads.
 - (b) absorbed overheads exceed budgeted overheads.
 - (c) actual overheads exceed budgeted overheads.
 - (d) budgeted overheads exceed absorbed overheads.
- (iv) Which one of the following statements is **FALSE**?
 - (a) A salary paid to a factory supervisor is an indirect wage.
 - (b) Direct wages are a variable cost.
 - (c) The purpose of time booking is to compute wages payable to workers.
 - (d) Job evaluation indicates the wage value of jobs.
- (v) Job costing will normally be used where a company undertakes:
 - (a) production of a given number of similar products.
 - (b) continuous production.
 - (c) production of a product for a long duration.
 - (d) production relating to a single special order.
- (vi) Which of the following statements is **FALSE**?
 - (a) There is no difference between notional profit and estimated profit in relation to contracts.
 - (b) A job is a small contract and a contract is a big job.
 - (c) Profit on each contract is computed every year on the incomplete portion of the contract.
 - (d) Contract work is carried out at the customers' site.

Use the following information to answer questions (vii) and (viii)

2000 kg of materials were issued to a production process. Normal loss was expected to be 5%. Actual production was 1,500 kg in Period 1 and 1,950 kg in Period 2.

- (vii) Which of the following happened in Period 1?
- (a) An abnormal gain of 400kg was realized.
 - (b) An abnormal loss of 400kg was incurred.
 - (c) An abnormal gain of 50kg was realized.
 - (d) An abnormal loss of 50kg was incurred.
- (viii) Which of the following happened in Period 2?
- (a) An abnormal gain of 50kg was realized.
 - (b) An abnormal loss of 50kg was incurred.
 - (c) An abnormal gain of 400kg was realized.
 - (d) An abnormal loss of 400kg was incurred.
- (ix) Profit under traditional costing and marginal costing will be the same if there:
- (a) are no opening & closing stocks.
 - (b) is opening stock and no closing stock.
 - (c) is closing stock and no opening stock.
 - (d) are both opening and closing stocks.
- (x) Which of the following investment appraisal techniques is most superior?
- (a) Accounting rate of return.
 - (b) Internal rate of return.
 - (c) Pay back period.
 - (d) Net present value.
- (xi) Which of the following are characteristics of the just-in-time manufacturing technique?
- (i) Elimination of non-value added activities.
 - (ii) Zero inventories.
 - (iii) Continuous input.
 - (iv) Zero defects.
 - (v) Limited authority to workers.
- (a) (i), (ii) and (iii).
 - (b) (i), (ii) and (iv).
 - (c) (i), (ii), (iii) and (iv).

(d) (ii), (iii) and (v).

- (xii) A profit-volume graph is an improvement over the break-even chart because:
- (a) it shows the relationship of profit to volume of sales.
 - (b) it shows the break-even point.
 - (c) it shows that there is no relationship between contribution and sales.
 - (d) the effect of various product mixes on profits cannot be studied from a single break-even chart.
- (xiii) The budget preparation process involves the following steps **EXCEPT:**
- (a) preparation of a sales budget.
 - (b) negotiation of budgets with superiors.
 - (c) coordination and review.
 - (d) variance analysis.
- (xiv) Which of the following is **NOT** a liquidity ratio?
- (a) $\frac{\text{Current assets}}{\text{Current liabilities}}$
 - (b) $\frac{\text{Average stock} \times 365 \text{ days}}{\text{Cost of sales}}$
 - (c) $\frac{\text{Debt}}{\text{Equity}}$
 - (d) $\frac{\text{Current assets} - \text{inventory}}{\text{Current liabilities}}$
- (xv) Over trading refers to:
- (a) having excessive working capital.
 - (b) excessive trading with insufficient long term finance.
 - (c) low return on investment.
 - (d) tying up of long-term funds.
- (xvi) The issue of new shares to new shareholders is done through the following methods **EXCEPT:**
- (a) private placing.
 - (b) offer for sale.
 - (c) public issue by prospectus.
 - (d) rights issue.

- (xvii) Capital markets render the following services **EXCEPT**:
- (a) finance to solve liquidity problems.
 - (b) offering long-term finance.
 - (c) enabling companies and individuals obtain long-term finance.
 - (d) offering secondary markets for liquidation of investments.
- (xviii) Which of the following is the principal advantage of the discounted cash flow appraisal methods?
- (a) Taking into account the time value of money.
 - (b) Can be used as a screening device to eliminate inappropriate projects.
 - (c) Use accounting profits to evaluate projects.
 - (d) Favour short-term projects.
- (xix) In the course of producing a product, a yield variance arises when:
- (a) raw materials are not mixed in standard proportions.
 - (b) there is a difference between what the input should have been for actual output and the actual input.
 - (c) the direct material price differs from the standard price.
 - (d) materials used differ from standard materials.
- (xx) Which of the following would **NOT** be appropriate when setting standards for costing?
- (a) The normal level of activity should always be used for absorbing overheads.
 - (b) Average prices for materials should be used.
 - (c) The labour rate used will be the rate at which labour is paid.
 - (d) Average material usage should be established based on generally accepted working practices.

SECTION B**Question 2**

The management of Primula Ltd has identified a strategic need to acquire a machine in one of its production departments. A choice has to be made between two models of the machine; Minor and Mega. They are not sure which of the two models to buy. The following cash flows are expected from the machines:

	Minor Shs million	Mega Shs million
Cash outflow	500	800
Net cash inflows		
Year		
1	250	150
2	100	200
3	100	250
4	50	100
5	150	100
6	100	250
Scrap	20	80

Funds are available for only one model. The company's cost of capital is 12% and Primula Ltd depreciates its assets on straight line basis.

Required:

- (a) Recommend which of the models is better under the internal rate of return (IRR) appraisal technique.
(13 marks)
- (b) Describe circumstance under which the net present value (NPV) and IRR give conflicting conclusions.
(2 marks)
- (c) Briefly explain the factors that influence replacement decisions.
(2 marks)
- (d) Fast & Loose Ltd has an outstanding 4-year 8% bond of Shs 1,000 par value on which interest is paid annually. Determine the market value of the bond if the:
 - (i) market required rate of return is 15%.
 - (ii) market required rate of return dropped to 12%.
 - (iii) coupon rate were 15% instead of 8% and the market rate of return 8%.

(3 marks)**(Total 20 marks)**

Question 3

(a) The following budget and actual data related to ZED Ltd for the past three periods:

Budget	Period 1	Period 2	Period 3
Sales (units)	10,000	14,000	12,200
Production (units)	8,000	14,200	12,400
Fixed overheads (Shs '000')	1,040	1,917	1,736
Actual	Period 1	Period 2	Period 3
Sales (units)	9,600	12,400	10,200
Production (units)	8,400	13,600	9,200
Fixed overheads (Shs '000')	1,120	1,832	1,674

The value of opening and closing inventory of units produced is arrived at using first in first out (FIFO) method of valuation. The budgeted and actual opening inventory for Period 1 was 2,600 units and its valuation included Shs 331,500 of fixed overheads. The company absorbs overheads using a predetermined absorption rate which is the same for all periods. Assume that variable cost per unit and selling price per unit remained the same for each of the periods.

Required:

(a) Calculate the under or over recovery of fixed overheads for each period and show how it affected the profit or loss.

(11 marks)

(b) Explain why overheads absorbed using a predetermined rate may differ from actual overheads incurred for the same period.

(3 marks)

(c) Raggy Electronics Ltd sold 100 radios in 2009 at a price of Shs 50,000 each. The cost structure per radio is:

	Shs
Materials	10,000
Labour	5,000
Variable overheads	<u>2,500</u>
Marginal cost	17,500
Fixed overheads	<u>20,000</u>
Total	<u>37,500</u>

Due to competition, the price has to be reduced to shs 42,500 for the coming year. Assuming no change in costs, how many radios shall be sold to ensure the same amount of profit as in 2009.

(6 marks)

(Total 20 marks)

Question 4

- (a) Fontana Ltd deals in the manufacture of detergents. The company uses a marginal costing system. The actual and budgeted results for November 2010 were as follows: There were no opening or closing inventories.

	Fixed budget	Actual
Sales & production	1000 units	700 units
	Shs'000	Shs'000
Sales	20,000	14,200
Variable cost of sales:		
Direct materials	8,000	5,200
Direct labour	4,000	3,100
Variable overhead	<u>2,000</u>	<u>1,500</u>
Contribution	14,000	9,800
Fixed costs	<u>5,000</u>	<u>5,400</u>
Profit/ (loss)	<u>1,000</u>	<u>(1,000)</u>

Required:

Prepare a budget that will be useful for management control purposes.

(10 marks)

- (b) Abacus Ltd manufactures product AB which passes through one process and uses process costing to account for costs. Materials are always added at the start of the process. On 1 November 2010, there was opening work in progress of 12,000 units which was 60% complete. The costs of opening work in progress were as follows:

Materials	Shs 48,000,000
Conversion cost	Shs 30,600,000

During November the following costs were incurred;

Materials amounting to 32,000 units were introduced to the process valued at Shs 128 million, conversion cost amounting to Shs 150 million were incurred. At 30 November 2010, there was closing work in progress of 8,000 units which was 75% complete with respect to conversion costs.

Required:

Prepare, the following for the month ended 30 November 2010, a:

(i) statement of equivalent production **(3 marks)**

(ii) statement of cost per unit. **(2 marks)**

(iii) statement of valuation of closing work in progress and completed units. **(2 marks)**

(iv) process account. **(3 marks)**
(Total 20 marks)

Question 5

Tiger Ltd manufacturers and sales locks and household security fittings. Over the last 12 months ended 31 December 2009, the company has experienced increased problems with late payment by debtors. Credit sales of the past 12 months of Shs 67.5 million show an increase of 10% over the previous year, the company's overdraft on which it is charged 12% per annum has increased by Shs 1,800,000 over last year. The company wants to reduce its debtor collection period so as to improve its working capital. The following information has been extracted by the management accountant of Tiger Ltd.

Total debtor payment by value (%)	Average collection period (days)
5	30
28	45
10	60
30	75
16	90
11	120

Tiger Ltd is considering two options to address the bad debts problem:

Option I

Bad debts currently stand at shs 2 million per annum. Tiger Ltd is considering introduction of early settlement discounts. The current invoicing terms require payment to be made within 30 days of the date of issue of the invoice. The management accountant has suggested that a 1% discount be offered to all customers who comply with these payment terms and he estimates that 50% of total payments (by

value) would be on these terms (30 days settlement period). The discount scheme would be expected to be taken up by customers who already pay in 75 days or less.

Option II

Under this alternative, Tiger Ltd is considering the use of the services of a debt collection firm which has quoted a price of 1% of sales receipts. It is estimated that using the debt collection service, it will reduce debtor days by 20 and eliminate 50% of bad debts.

Required:

- (a) Analyse the current position before considering the two options.
(4 marks)
- (b) Calculate, for the period ended 31 December 2009, the change in working capital requirements and bad debts which would result from:
- (i) Option I, the introduction of early settlement discounts.
(6 marks)
 - (ii) Option II, the use of the debt collection services.
(5 marks)
 - (iii) Recommend which option should be adopted.
(1 marks)
- (c) Outline the dangers of over reliance on trade credit as a source of finance.

(4 Marks)

(Total 20 marks)

SECTION C

Question 6

- (a) Explain what is meant by a 'rolling budget'. What additional benefit does it have compared to the annual style of budget?
(4 marks)
- (b) Assess the benefits achieved by an organization adopting a zero-base approach to its budgetary process.
(5 marks)
- (c) What are the advantages and disadvantages of centralized storage?
(6 marks)
- (d) Enumerate the features of a good incentive scheme.

(5 marks)

(Total 20 marks)

Question 7

(a) Explain why activity-based costing might lead to more accurate assessment of management performance than absorption costing.

(5 marks)

(b) Briefly explain the possible reasons for inventory discrepancies revealed by physical inventory counts and how they can be avoided.

(7 marks)

(c) Explain the relevance of the following in contract costing?

(i) Escalation clause

(2 marks)

(ii) Architects certificate

(1 mark)

(d) Define the following terms:

(i) Differential cost.

(ii) Opportunity cost.

(iii) Marginal cost.

(iv) Controllable cost.

(v) Sunk cost.

(5 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	0.799	0.787	0.776	0.766	0.756	0.731	0.694
3	0.772	0.757	0.743	0.731	0.719	0.709	0.699	0.689	0.664	0.579
4	0.708	0.694	0.681	0.669	0.658	0.648	0.638	0.628	0.603	0.482
5	0.650	0.637	0.625	0.613	0.602	0.592	0.582	0.572	0.547	0.402
6	0.599	0.586	0.574	0.562	0.551	0.541	0.531	0.521	0.496	0.335
7	0.554	0.541	0.529	0.517	0.506	0.496	0.486	0.476	0.451	0.279
8	0.512	0.500	0.488	0.476	0.465	0.455	0.445	0.435	0.410	0.233
9	0.473	0.461	0.449	0.437	0.426	0.416	0.406	0.396	0.371	0.194
10	0.437	0.425	0.413	0.401	0.390	0.380	0.370	0.360	0.335	0.162
11	0.404	0.392	0.380	0.368	0.357	0.347	0.337	0.327	0.302	0.135
12	0.373	0.361	0.349	0.337	0.326	0.316	0.306	0.296	0.271	0.112
13	0.344	0.332	0.320	0.308	0.297	0.287	0.277	0.267	0.242	0.093
14	0.317	0.305	0.293	0.281	0.270	0.260	0.250	0.240	0.215	0.078
15	0.292	0.280	0.268	0.256	0.245	0.235	0.225	0.215	0.190	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	1.667	1.644	1.621	1.600	1.566	1.528
3	2.531	2.488	2.445	2.402	2.360	2.317	2.274	2.231	2.177	2.106
4	3.240	3.170	3.100	3.030	2.970	2.910	2.850	2.790	2.690	2.589
5	3.890	3.790	3.690	3.600	3.510	3.430	3.350	3.270	3.120	2.991

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	4.48	4.35	4.23	4.11	3.99	3.88	3.78	3.68	3.49	
6	6	5	1	1	8	9	4	5	8	3.326
	5.03	4.86	4.71	4.56	4.42	4.28	4.16	4.03	3.81	
7	3	8	2	4	3	8	0	9	2	3.605
	5.53	5.33	5.14	4.96	4.79	4.63	4.48	4.34	4.07	
8	5	5	6	8	9	9	7	4	8	3.837
	5.99	5.75	5.53	5.32	5.13	4.94	4.77	4.60	4.30	
9	5	9	7	8	2	6	2	7	3	4.031
	6.41	6.14	5.88	5.65	5.42	5.21	5.01	4.83	4.49	
10	8	5	9	0	6	6	9	3	4	4.192
	6.80	6.49	6.20	5.93	5.68	5.45	5.23	5.02	4.65	
11	5	5	7	8	7	3	4	9	6	4.327
	7.16	6.81	6.49	6.19	5.91	5.66	5.42	5.19	4.79	
12	1	4	2	4	8	0	1	7	3	4.439
	7.48	7.10	6.75	6.42	6.12	5.84	5.58	5.34	4.91	
13	7	3	0	4	2	2	3	2	0	4.533
	7.78	7.36	6.98	6.62	6.30	6.00	5.72	5.46	5.00	
14	6	7	2	8	2	2	4	8	8	4.611
	8.06	7.60	7.19	6.81	6.46	6.14	5.84	5.57	5.09	
15	1	6	1	1	2	2	7	5	2	4.675