

# THE PUBLIC ACCOUNTANTS EXAMINATIONS BOARD

*A Committee of the Council of ICPAU*

## CPA (U) EXAMINATIONS

### LEVEL ONE

#### MANAGEMENT ACCOUNTING AND FINANCE – PAPER 6

**WEDNESDAY, 17 JUNE 2009**

#### 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 11.
7. Please read further instructions on the answer book.

## SECTION A

### Question 1

- (i) Employee empowerment involves encouraging and authorizing workers to take initiatives to:
  - (i) improve operations.
  - (ii) reduce costs.
  - (iii) improve customer service
  - (a) (i) and (ii).
  - (b) (i) and (iii).
  - (c) (ii), and (iii).
  - (d) (i), (ii) and (iii).
- (ii) When absorbed overheads are greater than actual overheads, there is an:
  - (a) under absorption.
  - (b) over absorption.
  - (c) over apportionment.
  - (d) under apportionment.
- (iii) The inventory control system that updates inventory values and quantities after every movement in inventory to calculate the balance on hand is referred to as:
  - (a) the BIN card system.
  - (b) continuous inventory counting taking system.
  - (c) perpetual inventory system.
  - (d) weighted average system.
- (iv) The key to a just-in-time (JIT), production system is:
  - (a) to provide products or services that do the best possible job of satisfying the customer.
  - (b) the constant effort to eliminate waste, reduce response time, simplify the design of both products and processes, and improve quality and customer service.
  - (c) the focus on the customer.
  - (d) the "pull" approach to controlling manufacturing.
- (v) If fixed costs per unit are Shs 10,000 when a firm produces 10,000 units of a product, what are the fixed costs per unit when 12,500 units are produced?
  - (a) Shs 12,500.
  - (b) Shs 6,000.
  - (c) Shs 8,000.
  - (d) Shs 10,000

- (vi) Which of the following entities is **NOT** likely to use a job-costing system?
- (a) Custom-furniture manufacturers.
  - (b) Consultancy firms.
  - (c) Hospitals.
  - (d) Specific order contractors.
- (vii) A firm that uses labour hours to apply overheads to manufacturing may have increased amounts of under-applied overheads at the end of a period if:
- (a) suppliers of direct materials increase prices across-the-board.
  - (b) the firm terminates two production supervisors.
  - (c) employees are hit hard with a widespread outbreak of swine flu.
  - (d) direct labourers are granted a wage increase.
- (viii) Rex Co. Ltd had 4,000 units of work in process on 1 April 2008. During April, 11,000 units were completed and as of 30 April 5,000 units remained in production. How many units were started on during April?
- (a) 5,000.
  - (b) 10,000
  - (c) 11,000.
  - (d) 12,000
- (ix) When considering whether to investigate a variance, managers should consider the following **EXCEPT**:
- (a) size of the variance.
  - (b) pattern of recurrence.
  - (c) trends over time.
  - (d) nature, namely, whether favourable or unfavourable.
- (x) A cost centre may take any of the following forms **EXCEPT**:
- (a) an output.
  - (b) a department.
  - (c) a machine.
  - (d) an area.

- (xi) Which of the following statements concerning preferred stock is **NOT** correct?
- (a) Preferred stock has a par (or liquidating) value.
  - (b) Most preferred issues are cumulative, meaning that the cumulative total of all unpaid preferred dividends must be paid before dividends can be paid on the common stock.
  - (c) Unpaid preferred dividends are called warrants.
  - (d) Preferred stock is a hybrid—it is similar to bonds in some respects and to common stock in other ways.
- (xii) Business risk is defined as the:
- (a) equity risk that comes from the nature of a firm's operating activities.
  - (b) probability that a firm will file for bankruptcy.
  - (c) situation in which a firm causes its creditors to suffer a financial loss.
  - (d) probability that a firm's cost of equity capital will increase.
- (xiii) Which of the following statements best describe(s) the optimal capital structure?
- (i) Optimal capital structure is the mix of debt, equity, and preferred stock that maximizes the company's earnings per share (EPS).
  - (ii) Optimal capital structure is the mix of debt, equity, and preferred stock that maximizes the company's stock price.
  - (iii) Optimal capital structure is the mix of debt, equity, and preferred stock that minimizes the company's weighted average cost of capital (WACC).
- (a) (i).
  - (b) (ii).
  - (c) (iii).
  - (d) (ii) and (iii).
- (xiv) A decrease in a firm's willingness to pay dividends is likely to result from an increase in its:
- (a) earnings stability.
  - (b) access to capital markets.
  - (c) profitable investment opportunities.
  - (d) collection of accounts receivable.

- (xv) The "risk-free rate" includes the following components:
- (a) a "real" rate of return and an inflation component.
  - (b) a "real" rate of return and a component for interest rate risk.
  - (c) an inflation component and a component for interest rate risk.
  - (d) a nominal rate of return and a component of interest rate risk.
- (xvi) Which of the following sources of finance to companies is the most widely used in practice?
- (a) Rights issue.
  - (b) Bank borrowing.
  - (c) New share issues.
  - (d) Retained earnings.
- (xvii) Which of the following is **LEAST** likely to be reason for seeking stock market flotation?
- (a) Access to a wider pool of finance.
  - (b) Enhancement of the company's image.
  - (c) Improving the existing owner's control over the business.
  - (d) Transfer of capital to other uses.
- (xviii) For a certain project, the net present value at a discount rate of 15% is Shs 36,700 and at a rate of 18% the net present value is negative at (Shs 13,900). What is the internal rate of return of the project?
- (a) 16.5%
  - (b) 15.7%
  - (c) 16.6%
  - (d) 17.2%
- (xix) a decision to ..... is **NOT** an investment decision.
- (a) take over of another company
  - (b) launch a new research project
  - (c) retain profits for reinvestment in the business
  - (d) carry out an advertising campaign
- (xx) If a system of activity-based budgeting (ABB) is in use, the cost of scheduling production can be flexed by the number of:
- (a) set-ups.
  - (b) direct labour hours.
  - (c) parts used in production.
  - (d) items produced.

**SECTION B****Question 2**

- (a) AX Ltd manufactures three products, X, Y and Z which undergo similar production processes and use similar materials and types of labour. The company's projected profit statement for the forthcoming year, as submitted to the board, is as follows:

	<b>X</b>	<b>Y</b>	<b>Z</b>	<b>Total</b>
	<b>Shs'000</b>	<b>Shs'000</b>	<b>Shs'000</b>	<b>Shs'000</b>
Sales	<u>25,600</u>	<u>18,700</u>	<u>12,200</u>	<u>56,500</u>
Direct material	5850	3,650	4,560	14,060
Direct Labour	4,500	2,640	3,570	10,710
Variable overhead	<u>4,620</u>	<u>2,700</u>	<u>4,350</u>	<u>11,670</u>
	<u>14,970</u>	<u>8,990</u>	<u>12,480</u>	<u>36,440</u>
Contribution	<u>10,630</u>	<u>9,710</u>	<u>(280)</u>	20,060
Fixed overhead				<u>3,580</u>
Profit				<u>16,480</u>

Costs of production for Product Z have progressively increased due to decrease in its demand over the past periods. The board of directors of AX Ltd have made a decision to discontinue the production of product Z. It was decided therefore the labour force released from production of product Z should be deployed to increase production of products X and Y; 65% of budgeted labour for product Z being transferred to X and the remainder to Y. The increased production of X and Y is not expected to change their cost/ selling price relationships.

Assume that any increase in direct labour cost by a certain percentage, increases the volume of production by the same percentage.

**Required:**

Prepare the revised forecast profit statement and comment briefly upon the effect of the Board's decision.

**(13 marks)**

- (b) Alpha Ltd has been dealing in the manufacture of textiles. For the next month to 31 July 2009, the company expects to operate at a production level of 8,000 bales of cloth representing a capacity of 80%. The budget estimates for the company are as follows:

	<b>Unit Cost</b>	<b>Total (at 8,000 bales)</b>
	<b>Shs '000'</b>	<b>Shs '000</b>
Sales	<u>600</u>	<u>4,800,000</u>
Variable costs:		
Direct labour	120	960,000
Raw materials	170	1,360,000
Variable overheads	<u>70</u>	<u>560,000</u>
	<u>360</u>	<u>2,880,000</u>
Fixed production overheads	150	1,200,000
Other fixed costs	<u>-</u>	<u>300,000</u>
Total costs	<u>510</u>	<u>4,380,000</u>
Budgeted profit	<u><b>90</b></u>	<u><b>420,000</b></u>

An opportunity has arisen from an NGO to manufacture 1000 bales of cloth per month at a price of Shs 400,000 per bale for displaced persons in war zone areas.

### Required

Advise Alpha Ltd as to whether they should accept the contract.

**(7 marks)**

**(Total 20 Marks)**

### Question 3

Rho Ltd makes and sells one product. The standard production cost for one unit is as follows:

	<b>Shs</b>
Direct labour (6 hours at Shs 1200 per hour)	7,200
Direct Materials (8 kg at Shs 1400 per kg)	11,200
Variable Production overhead	600
Fixed production overhead	<u>4,000</u>
Standard production cost	<u><b>23,000</b></u>

Normal output is 32,000 units per annum and this figure is used for the fixed production overhead calculation.

Costs relating to selling, distribution and administration are:

Variable	20% of sales value
Fixed	Shs 36 million per annum.

The only variance is a fixed production overhead volume variance. There are no units in finished goods inventory as at 1 January 2009. The fixed overhead expenditure is spread evenly throughout the year. The selling price per unit is Shs 47,000.

The number of units to be produced and sold for the six months period to 30 June 2009 are budgeted as:

Production 17,000  
Sales 14,000

**Required:**

Prepare statement for management showing sales, costs and profits for each of the six months ending 30 June 2009 using:

- (a) Absorption costing method. (12 marks)  
(b) Marginal Costing method. (8 marks)

**Total (20 marks)**

**Question 4**

- (a) Zhee Ltd is a manufacturing company dealing in production of steel products. The company wants to replace a number of its machines but the production manager is undecided between the Vye Machine, a more expensive machine with a life of 10 years, and the Uye machine with an estimated life of 5 years. If the Uye machine is chosen it is likely that it would be replaced at the end of 5 years by another Uye machine. The costs of maintenance differ between the two types of machines as shown below:

	Vye machine	Uye machine
	Shs	Shs
Purchase price (Shs million)	38	26
Trade-in value (Shs million)	6	6
Annual repairs (Shs million)	4	5.2
Year of overhaul	8 <sup>th</sup>	4 <sup>th</sup>
Overhaul costs (Shs million)	8	4
Estimated financing costs per annum averaged over machine life	10%	10%

**Required:**

Recommend, with supporting workings which machine to purchase, stating any assumptions made.

**(13 marks)**



- (b) Whee Ltd is a retailer of soft drinks. The company has an annual demand of 40,000 crates. The crates are purchased for inventory in lots of 5000 and cost Shs 3000 each. Fresh supplies can be obtained immediately, ordering and transport costs amounting to Shs 10,000 per order. The annual cost of holding one crate in stock is estimated at Shs 500.

**Required:**

- (i) Determine the economic order quantity (EOQ). **(3 marks)**  
 (ii) Compute the total annual cost for the company. **(4 marks)**

**(Total 20 marks)**

**Question 5**

- (a) Two companies Puax Ltd and Quax Ltd are both entirely financed by equity capital. The following data relates to the period ended 31 May 2009:

	<b>Puax Ltd</b>	<b>Quax Ltd</b>
Number of ordinary shares of Shs 1,000 per share (Shs'000)	400	650
Total current earnings (Shs'000)	120,500	155,600
Total current dividends (Shs'000)	12,300	80,700
Market value per share, ex-div (Shs)	1960	970
Balance sheet value of capital employed (Shs'000)	856,000	575,000
Total dividends five years ago (Shs'000)	4,250	50,350

You are further informed that both companies are in the same line of business and sell similar products.

**Required:**

Estimate the shareholders' required rate of return for both companies, using the past rate of growth model and comment on the rate of return for both companies.

**(11 marks)**

- (b) AK Limited has a 7% redeemable debenture in issue, quoted at Shs 14,000. It is redeemable in 5 years' time at Shs 14,000. It also has a 10% convertible debenture which has 5 years to run. The terms of conversion are 30 shares per Shs 10,000 debenture. If the debenture is not converted, it will be redeemed at Shs 12,000.

**Required:**

At what current share price would a debenture holder be indifferent between converting the debenture now or holding on to it?

**(9 marks)**

**(Total 20 marks)**

## SECTION C

### Question 6

- (a) Despite its limitations, the payback period is a popular means of investment appraisal. Discuss.

**(8 marks)**

- (b) The Board of Directors of Maxico Group of Companies have received an explanation from the group's Chief Finance Officer explaining the status of their two subsidiaries: Max Company Ltd and Axi Company Ltd. Max Company Ltd has been cited as over capitalised while Axi Company Ltd is over-trading. The Board of Directors, however, are not satisfied with the explanation by the Chief Finance Officer and have engaged you as a consultant to advise them better.

#### **Required:**

Write a report to the Board of Directors of Maxico Group of Companies explaining the different indicators of over capitalisation and over trading.

**(12 marks)**

**(Total 20 marks)**

### Question 7

- (a) Briefly distinguish between a cost centre and a cost unit.

**(4 marks)**

- (b) Differentiate between information required for financial accounting and management accounting.

**(5 marks)**

- (c) What is meant by the term 'budget manual' and what are the contents therein?

**(7 marks)**

- (d) What is meant by the term 'flexible budget' and what are the factors to consider when preparing a flexible budget?

**(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