

Pearson LCCI

Certificate in Management Accounting

Level 3

Tuesday 10 June 2014

Time: 3 hours

Paper Reference

ASE3024

You will need:

An answer book

Instructions

- Do **not** open this examination paper until you are told to do so by the supervisor.
- Use **black/blue** ink or ball-point pen
 - *pencil can only be used for graphs, charts, diagrams, etc.*
- Ensure your answers are written clearly.
- Begin your answer to each question on a new page.
- Write on both sides of the page.
- All answers must be correctly numbered but need not be in numerical order.
- If you need more space, use the additional sheets provided. Write your name, candidate number and question number on each sheet and attach them to the inside of your answer book. State, on the front of your answer book, the number of additional sheets attached.
- Workings must be shown.
- Answer **all** questions.

Information

- The total mark for this paper is 100.
- There are five questions in this question paper
 - *each question carries equal marks.*
- The marks for **each** question are shown in brackets
 - *use this as a guide as to how much time to spend on each question.*
- You may use a calculator provided the calculator gives no printout, has no word display facilities, is silent and cordless. The provision of batteries and their condition is your responsibility.

Advice

- Read each question carefully before you start to answer it.
- Check your answers carefully if you have time at the end.

Turn over ►

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Answer ALL questions.

- 1 Koscielny makes a single product. The following data relates to the past four operating periods.

	Period 1	Period 2	Period 3	Period 4
Production and sales (units)	14,500	12,400	16,800	15,250
Total operating costs	£392,700	£375,000	£483,000	£503,700
General price-level index	110	125	138	146

Required

(a) Use the high-low method to:

- (i) separate the total operating costs into a variable cost per unit and total fixed costs per period at the Period 1 general price-level index (5)
- (ii) estimate the total operating costs expected in Period 5 if 18,120 units are produced and sold and the general price-level index is 155, using the Period 5 price index as the basis for your answer. (3)

Ofuso-Asare manufactures a single product.

The following budgeted information has been prepared (per unit) for the next period:

Selling price	£37.50
Direct materials	£4.70
Direct labour	£12.75
Variable overheads	£4.80

Sales and production are planned to be 14,000 units and fixed overheads £81,440 for the period.

The company is concerned about the quality of and demand for its product.

It is considering installing new machinery, which would reduce the direct labour costs by one-third but increase total fixed overheads by 50%.

All other costs per unit and the selling price would remain unchanged.

Required

- (b) Calculate the **contribution per unit, break even in units**, and the **expected profit**:
- (i) based on the existing production method (2)
- (ii) if the new machinery was introduced. (4)

(c) Using your calculations in (b)(i) and (ii), plot **both** of the scenarios on a **single profit/volume chart** on the graph paper provided, clearly labelling:

(i) the break-even points for both proposals

(ii) the potential profit for each proposal at the maximum capacity.

(6)

(Total for Question 1 = 20 marks)

- 2 Erikson has budgeted to produce 10,000 units of its single product in a period. It operates a standard costing system.

The following information has been extracted from the product's standard cost card:

Direct labour per unit	2½ hours x £12.60 per hour
Fixed production overheads	2½ hours x £18.00 per hour

The fixed production overheads are absorbed on the basis of direct labour hours.

The actual results for the period were as follows:

Production	9,700 units
Direct labour	26,160 hours
Fixed production overheads	£483,300

Required

(a) Calculate the following variances for the period:

- (i) Fixed production overhead expenditure (2)
- (ii) Fixed production overhead volume (2)
- (iii) Fixed production overhead capacity (2)
- (iv) Fixed production overhead efficiency (2)

(b) Provide a reconciliation of the fixed production overhead variances in (a). (2)

The following budgeted figures relate to a division of Dembele, for the coming year:

	£000
Sales (60,000 units x £20)	1,200
Costs:	
Variable (60,000 units x £8)	480
Fixed	420

Investment in the division £1,350,000

The company's cost of capital is 12% per annum.

Required

(c) For the coming year, calculate for the division:

- (i) the return on capital employed (ROCE) (2)
- (ii) the residual income (RI). (2)

The division has an opportunity to sell an additional 12,000 units per annum at a selling price of £18 per unit for the next four years.

This would require an increase in investment of £300,000, which would be depreciated on a straight line basis over the four years with no residual value.

Required

(d) Calculate the revised ROCE and RI for the coming year if this opportunity is undertaken.

(6)

(Total for Question 2 = 20 marks)

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3 Kagowa is considering investing in a new machine to increase its capacity in order to manufacture a new product.

The machine would cost £800,000 with a residual value of £60,000 after its expected useful life of five years.

The forecast net operating cash inflows for the new product are as follows:

Year	£000
1	300
2	420
3	610
4	450
5	165

The operation of the new machine will require an immediate additional investment in working capital of £180,000. This additional working capital will be released at the end of the useful life of the machine.

If the new product is manufactured, the company will have to discontinue an existing product that makes an annual contribution of £125,000.

The company's cost of capital is 12% per annum.

Discount factors:	Year	12%	18%
	1	0.893	0.847
	2	0.797	0.718
	3	0.712	0.609
	4	0.636	0.516
	5	0.567	0.437

Required

- (a) Calculate, in relation to the investment in the new machine, the:
- (i) net present value (6)
 - (ii) internal rate of return (3)
 - (iii) discounted payback period. (3)
- (b) Identify **three strengths** and **three weaknesses** of the internal rate of return as a method of evaluating capital investment projects. (6)
- (c) Give **two limitations** of the accounting rate of return as a method of evaluating capital investment projects. (2)

(Total for Question 3 = 20 marks)

- 4 The following financial information has been extracted by Sing Wen for the financial year ending 31 May 2014:

	£000
Sales	780
Purchases	330
Closing stock of finished goods	57
Debtors	72
Bank overdraft	25
Creditors	48

Further information:

All the sales and purchases were on credit.

1 year = 365 days.

The opening stock of finished goods was £47,000.

Required

- (a) Calculate the following working capital ratios to **two decimal places**:

- (i) finished goods stock turnover (number of times) (3)
- (ii) debtor collection period (days) (2)
- (iii) creditor payment period (days) (2)
- (iv) current ratio (1)
- (v) acid-test (quick) ratio. (2)

- (b) Using all the ratios calculated in (a), as well as the financial information provided, **critically comment** on the liquidity of the company, using the following industry averages as a basis for your answer:

Ratio	Industry average	
Stock turnover	10 times per year	
Debtor collection period (days)	35 days	
Creditor payment period (days)	35 days	
Current ratio	1.75 : 1	
Acid-test (quick) ratio	1.0 : 1	

(6)

(c) Calculate the **change** in value, in the relevant balance sheet item, resulting from each of the following, and **indicate** whether it is an increase or decrease:

(i) An increase of 15 days in the period of credit granted to customers (2)

(ii) A reduction of 10 days in the credit terms offered by suppliers (2)

(Total for Question 4 = 20 marks)

QUESTION 5 BEGINS ON THE NEXT PAGE.

- 5 Sone Aluko makes three separate components P, Q and R, used in the assembly of its products.

Production capacity is limited to 8,000 machine hours during the next period, which will not be sufficient to meet the expected demand.

It will be necessary, therefore, to buy in some of the components from an outside supplier to make up the shortfall.

The following information relates to the three components for the next period:

Component	P	Q	R
Budgeted demand (units)	1,800	2,000	2,200
Direct materials per unit	£4	£6	£8
Direct labour hours per unit	2	4	4
Direct labour rate per hour	£8	£8	£8
Machine hours per unit	2	3	3

Variable overheads are absorbed on direct labour hours at £2 per hour.

An outside contractor is willing to supply these components for the following prices:

Component P £48; Component Q £76; and Component R £90 per unit.

Required

- (a) For the coming period:
- (i) calculate the shortfall in capacity (2)
 - (ii) determine the order of priority for production (4)
 - (iii) state clearly the quantities of each component that should be manufactured by the company and the quantities bought in from the outside supplier, in order to achieve the budgeted output at minimum cost. (4)
- (b) Describe **three** factors, apart from cost, that the company should take into consideration when buying in components from an outside supplier. (6)
- (c) Briefly explain the meaning of the following terms used in the context of decision making:
- (i) Opportunity cost (2)
 - (ii) Relevant cost (2)

(Total for Question 5 = 20 marks)

TOTAL FOR PAPER = 100 MARKS

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