Series 2 Examination 2010

CERTIFICATE IN MANAGEMENT ACCOUNTING

Level 3

Wednesday 7 April

Subject Code: 3024

Time allowed: **3 hours**

INSTRUCTIONS FOR CANDIDATES

- Answer all **5** questions.
- All questions carry equal marks.
- Write your answers in blue or black ink/ballpoint. Pencil may be used only for graphs, charts, diagrams, etc.
- Begin your answer to each question on a new page.
- All workings must be shown.
- All answers must be correctly numbered but need not be in numerical order.
- 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.

QUESTION 1

A company manufactures a single product which it sells for £15.00 per unit. Variable costs of production and fixed costs of production are £6.00 per unit and £135,000 per period respectively. The distribution of the product results in additional variable costs of £1.20 per unit and additional fixed costs of £30,750 per period. The company is budgeting sales of £375,000 for the coming period and its maximum production capacity is 35,000 units per period.

REQUIRED

(a) Calculate for the coming period, the budgeted:

- (i) break-even point (in sales units) (3 marks)
- (ii) profit. (3 marks)

The company is keen to improve its budgeted profit through increased sales in the coming period and is considering the following alternative sales strategies:

Strategy I

Reduce selling price by 10% in order to increase the total budgeted sales units by 25%. In addition, an advertising campaign costing £7,500 will further increase the original budgeted sales units by 8%.

Strategy II

Offer a 20% selling price discount to a single major customer who is prepared to buy 35,000 units. This will result in a 90% reduction in the fixed distribution costs per period.

If either of the sales strategies is adopted, variable costs of production will increase by £0.30 per unit produced above 28,000 units.

REQUIRED

(b) Calculate the revised budgeted profit under Strategy I and Strategy II. (12 marks)

(c) Recommend which sales strategy the company should adopt giving reasons for your advice. (2 marks)

(Total 20 marks)

QUESTION 2

A company operates a standard costing system for the single product that it manufactures and sells. The company had budgeted to produce and sell 5,000 units at a selling price of £90 per unit during Period 8. The following information has been extracted from its standard cost card for Period 8:

	£ per unit
Direct material (2 kg × £18.15 per kg)	36.30
Direct labour (1¾ hours × £8.40 per hour)	14.70
Fixed overhead	16.50

During Period 8, the actual production and sales were 4,720 units and the operating statement prepared for the period was as follows:

	£	**£**
Sales		392,940
Less Costs		
Direct materials (10,680 kg)	187,968	
Direct labour (7,630 hours)	69,433	
Fixed overheads	78,750	
		336,151
Operating profit		56,789

There were no stocks held at the beginning or end of Period 8.

REQUIRED

(a) Calculate the following variances for Period 8:

(i) sales price (2 marks)

(ii) sales volume profit (3 marks)

(iii) direct material price (2 marks)

(iv) direct material usage (2 marks)

(v) direct labour rate (2 marks)

(vi) direct labour efficiency (2 marks)

(vii) fixed overhead expenditure (2 marks)

(viii) fixed overhead volume (2 marks)

(b) Prepare a statement that reconciles the budgeted operating profit with the actual operating profit for Period 8.

(3 marks)

(Total 20 marks)

QUESTION 3

The accounts of a retail company for Year 5 are presented as follows:

Balance sheet at end of year

	£000	£000
Fixed assets (net book value)		680
Current assets		
Stock	840	
Trade debtors	920	
Cash at bank	40	1,800
		2,480
Less: Current liabilities		
Trade creditors		780
		1,700
Capital and reserves		
Share capital		1,000
Reserves		700
		1,700

Profit and loss statement for the year

	£000
Sales	3,800
Less: Cost of sales	2,280
Gross profit	1,520
Less: Operating expenses	1,200
Net profit	320

All sales and purchases are made on credit. Assume that 1 year = 365 days.

REQUIRED

(a) Calculate for Year 5, the:

(i) current ratio (to 2 decimal places) (2 marks)

(ii) working capital cycle (rounded to whole days). (3 marks)

The company is considering whether to grant extended credit facilities to its customers for the coming year. It is estimated that increasing the collection period for trade debtors by 24 days will result in 15% increase in sales. However, stocks held will have to be increased by 20% to cope with the increased demand. In order to finance the increase in stocks and debtors, the company will increase the payment period to trade creditors by 12 days and utilise bank overdraft facility at an interest rate of 8% for the remaining balance.

If the above policy is implemented, it is estimated that bad debts will increase by 5% of the trade debtors and operating expenses will increase by 7½%. The company expects to earn a constant gross profit of 40% on sales.

REQUIRED

(b) Calculate for the coming year, the expected increase in:

(i) working capital cycle (workings to be rounded to whole days) (5 marks)

(ii) net working capital investment in stock, trade debtors and trade creditors (workings to be rounded to the nearest £000) (5 marks)

(iii) net profit (workings to be rounded to the nearest £000). (5 marks)

(Total 20 marks)

QUESTION 4

A company manufactures a single product which is sold for £75 per unit. Details of the budgeted costs for the product are as follows:

Variable costs (per unit)	**£**
Direct material	20
Direct labour	15
Variable production overhead	9
Variable non-production overhead	3

Fixed costs (per period)	
Production overheads	£240,000
Non-production overheads	£150,000

Fixed production overheads are absorbed on the basis of 20,000 budgeted units of production per period.

The actual activity for Period 3 and Period 4 was as follows:

	Period 3	**Period 4**
Sales	16,000 units	20,000 units
Production	21,000 units	22,000 units

There was no stock at the start of Period 3.

REQUIRED

(a) Prepare profit statements for each of Period 3 and Period 4 using:

(i) absorption costing (8 marks)

(ii) marginal costing. (7 marks)

(b) Discuss the usefulness of marginal costing for short-term decision-making. (5 marks)

(Total 20 marks)

QUESTION 5

A company is considering acquiring new machinery to expand its production capacity. Two alternative machines with identical lifespan of four years have been identified and the profiles of their expected cash flows are as follows:

	Machine A £000	**Machine B £000**
Purchase cost of machine	500	800
Working capital requirement at Year 0	60	80
Estimated annual net cash inflows:		
Year 1	120	210
Year 2	260	320
Year 3	200	280
Year 4	130	260
Estimated disposal value of machine	30	100

The working capital required at Year 0 will be released at the end of Year 4. The machines are to be depreciated on a straight-line basis.

The company's cost of capital is 12% per annum and the relevant discount factors are as follows:

Year 1	0.893
Year 2	0.797
Year 3	0.712
Year 4	0.636

REQUIRED

(a) Calculate for each of **Machine A** and **Machine B**, the

(i) payback period (4 marks)
(ii) net present value. (8 marks)

(b) Recommend which machine should be purchased based on your answer to part (a), giving a reason for your decision

(2 marks)

(c) Describe the strengths and weaknesses of the payback method of capital investment appraisal.

(6 marks)

(Total 20 marks)

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