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**NQF**

**Certificate**

**6.2 ICMA**

**Introduction to Cost  
and Management Accounting**

**Monday 5 December 2016, Afternoon**

1. Time allowed: 3 hours.
2. Answer any four questions.
3. All questions carry 25 marks. Marks for subdivisions of questions are shown in brackets.
4. No books, dictionaries, notes or any other written materials are allowed in this examination.
5. Calculators, including scientific calculators, are allowed provided they are not programmable and cannot store or recall information. All other electronic devices, including mobile phones, are not permitted.
6. Note that £1 = 100 pence (p).
7. Candidates who break ABE Examination Regulations will be disqualified from the examinations.
8. Question papers must not be removed from the examination room.



### Answer any four questions

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**Q1** The ACME Bicycle Company keeps stock of a wide range of spare parts for use in the manufacture and repair of bicycles.

Stock issues are valued on a FIFO basis.

At 31 May 2015 according to the stock record for part AB20 the following units were in stock:

30 units received on 15 April 2015 @ £5.00 each

50 units received on 3 May 2015 @ £5.50 each

50 units received on 27 May 2015 @ £5.80 each

- (a) Calculate the cost of an issue of 60 units of AB20 on a FIFO basis. **(7 marks)**
- (b) It has been suggested that the company should change its policy and issue stock in future on a LIFO basis. Calculate the cost of an issue of 60 units of AB20 on a LIFO basis. **(7 marks)**
- (c) Explain what effect the change in valuation method will have on the calculation of the value of stock remaining. **(2 marks)**
- (d) Explain what effect the change in valuation method will have on the calculation of cost of goods sold and therefore on the gross profit. **(4 marks)**
- (e) Explain why it is important that the company can calculate the value of stock accurately. **(3 marks)**
- (f) Recently it was discovered that there was no stock of component AB20 remaining and production was disrupted. According to the stock record card there should have been 30 units in stock. You have been asked to investigate the reasons for this. Identify the two people to whom you would address your query in respect of the missing stock. **(2 marks)**
- (Total 25 marks)**

**Q2** Employees at Pye Ltd are paid a basic wage of £8.00 per hour for the first 7 hours worked per day from Monday to Friday. Overtime is paid at time plus a quarter for all hours in excess of the standard 7 hours per day on weekdays. All time worked on Saturday or Sunday is paid at time plus a quarter.

During a 35-hour week employees are expected to produce 1,050 units which equates to 30 units per hour worked. In addition to their hourly pay a weekly bonus of 50 pence per unit is paid for every unit produced in excess of this level.

Employees normally work from 8.30 until 12.00 and 13.00 until 16.30 from Monday to Friday. Basic hourly pay is treated as direct wages and any amounts other than this are classed as indirect wages.

During the week commencing 16 November 2015 Michael Rowe worked normal hours on Monday, Wednesday and Thursday. On Tuesday he worked the normal hours in the morning but then took only 30 minutes lunch break and worked from 12.30 until 18.00 that afternoon. On Friday he worked from 7.00 until 12.00 and then from 13.00 until 17.00 and on Saturday he worked from 9.00 until 12.00. During this week he produces 1,310 units.

**(a)** Produce a suitable employee timesheet to record sufficient details to be able to calculate:

- Hours worked morning and afternoon each day
- Basic pay
- Overtime payable
- Bonus payable
- Total wages
- Total direct labour cost
- Total indirect labour cost

**(11 marks)**

**(b)** Using the employee timesheet prepared in part **(a)**, enter Michael's hours worked and units produced and calculate Michael's pay for the week.

**(6 marks)**

**(c)** Present the ledger postings required for:

- (i) Direct wage cost
- (ii) Indirect wage cost

**(3 marks)**

**(d)** On receipt of his pay packet Michael complains that he feels he should have been paid a bonus for the full 260 units by which his output exceeded the standard weekly target of 1,050.

Write a short memo to Michael explaining how his pay has been calculated.

**(5 marks)**

**(Total 25 marks)**

**Q3** Morgan Manufacturing has four departments. Manufacturing of plastic components is carried out in the largely automated moulding department and these components are then assembled into products by hand in the assembly department.

There is also a maintenance department which serves the two manufacturing departments and a stores department which provides a service to the other three departments.

The following budgeted shared costs have been calculated for the year ended 30 November 2015:

	£
Rent	500,000
Heating and lighting	10,000
Machinery Insurance	100,000
Depreciation	750,000
Machine Power	80,000
Supervision	95,000

In addition, it is anticipated that the following directly allocated overheads will be incurred:

	£
Moulding	48,000
Assembly	17,000
Maintenance	11,000
Stores	9,000

The following information is also available:

	<b>Moulding</b>	<b>Assembly</b>	<b>Maintenance</b>	<b>Stores</b>
Floor area m <sup>2</sup>	8,000	6,000	2,000	4,000
Machinery value £	4,500,000		500,000	
Number of supervisors	1	2	1	1
Stores requisitions	12,480	12,480	6,240	
Maintenance hours	3,360	1,440		
Machine hours	50,000	4,000		
Labour hours	5,000	20,000		

Budgeted output for the year is 20,000 units.

- (a) Identify a suitable basis of apportionment for each of the shared costs. **(6 marks)**
- (b) Identify a suitable basis of re-apportionment for each of the two service departments. **(2 marks)**
- (c) Calculate overhead absorption rates for both the moulding and assembly departments. **(12 marks)**
- (d) Actual results are as follows:

Units produced	21,000
Actual expenditure moulding department £	1,400,000
Actual expenditure assembly department £	330,000

Calculate under-absorption or over-absorption of overheads for each of the moulding and assembly departments. **(3 marks)**

- (e) Explain how the figure calculated in part (d) will be treated in the accounts. **(2 marks)**
- (Total 25 marks)**

**Q4** Collins produces motor car accessories. The following cost card relates to a set of alloy wheels:

Material	20 kilograms	@	£6.50 per kilogram
Labour	1.2 hours	@	£16.00 per hour

Budgeted production for the month of November 2015 was 420 sets of wheels. The budgeted fixed overhead expenditure was £6,300. Following an increase in demand for the wheels, actual results for the month were as follows:

Sets of wheels produced	500
Material used	10,250 kilograms at a total cost of £65,600
Labour cost	550 hours at a total cost of £11,000
Fixed overhead expenditure	£7,000

- (a) Calculate the standard full absorption cost of one set of wheels. **(4 marks)**
- (b) Calculate the actual full absorption cost of one set of wheels for the month of November 2015. **(5 marks)**

**Further information:**

The sales manager is confident that demand will remain at 500 sets of wheels per month and so it has been suggested that if additional machinery were installed it would be possible to produce wheels in batches of 100 sets at a time which would reduce the labour time per unit to 1 hour. It would also be possible to reduce by 5% the amount of material used.

Additional monthly maintenance costs and depreciation on the new machinery would increase the budgeted fixed cost per month to £9000.

- (c) Calculate the revised standard cost per set of wheels if the new machinery is purchased. **(4 marks)**
- (d) Calculate the selling price of one set of wheels if the new machinery is purchased and the company wishes to achieve a 25% profit margin. **(2 marks)**
- (e) Recommend whether the new machinery should be purchased. Give reasons for your answer. **(10 marks)**
- (Total 25 marks)**

**Q5** The Elvedon Sports Company is looking to introduce a new range of all-terrain adventure bicycles and has compiled the following information:

- Each bicycle will sell for £150.00
- Material cost per bicycle will be £40.00
- Labour cost per bicycle will be £60.00

The company has also calculated that it will be necessary to set up a new production line for which the fixed costs will be £75,000 per annum.

The sales manager is confident that the company can sell 2,500 bicycles each year.

**(a)** Draw a break-even chart for the new bicycle showing clearly the following items:

- (i) Total costs **(2 marks)**
- (ii) Total revenues **(2 marks)**
- (iii) The breakeven point **(2 marks)**
- (iv) The margin of safety **(2 marks)**

**(b)** Use the breakeven chart to identify the approximate profit or loss if only 2,200 sales of the new bicycle are achieved. **(5 marks)**

**(c)** Prepare a short report to management explaining, on the basis of the above analysis, whether you feel the new product is viable. State any other factors which you feel should be taken into account. **(12 marks)**  
**(Total 25 marks)**

**Q6** The managing director of the Arco Biscuit Company has recently invested heavily in new machinery for his factory. The company has made a substantial profit and he is hoping to reduce this in order to avoid a large tax bill.

He is disappointed to learn that his new machinery will be recorded as an asset and not as an expense and will therefore not directly reduce the company profit straight away and he asks you to explain which items of expenditure are classed as revenue expenditure and which are capital expenditure.

**(a)** Identify whether each of the following items is capital expenditure or revenue expenditure:

- (i) Redecoration of the company boardroom **(1 mark)**
- (ii) A new delivery van **(1 mark)**
- (iii) Raw materials to make biscuits **(1 mark)**
- (iv) Repairs to packaging machinery **(1 mark)**
- (v) Installation costs for new production equipment **(1 mark)**
- (vi) A replacement heater for the factory **(1 mark)**

**(b)** Explain the factors that determine whether an item is capital or revenue expenditure. **(10 marks)**

**(c)** The company bank balance at 30 November 2014 was £21,568. During the year ended 30 November 2015 the company made a net profit of £569,702 and the bank balance at 30 November 2015 was £36,277.

- (i) Explain why the change in the bank balance is not the same as the net profit. **(3 marks)**
  - (ii) Identify three transactions that would cause the bank balance to reduce without affecting the net profit. **(3 marks)**
  - (iii) Identify three transactions that would affect the profit without causing any change to the bank balance. **(3 marks)**
- (Total 25 marks)**

- Q7 (a)** Explain what is meant by each of the following terms and explain how each is calculated:
- (i) Standard labour cost **(3 marks)**
  - (ii) Fixed overhead expenditure variance **(2 marks)**
  - (iii) Material usage variance **(3 marks)**
  - (iv) Full absorption cost per unit **(2 marks)**

**(b)** Thompson's Foundry makes high quality kitchen equipment.

The standard cost of a cast iron saucepan which it manufactures comprises the following:

Materials	3 kilos @ 2.50 per kilo
Labour	0.4 hours @ £12.00 per hour
Fixed overheads	0.4 hours @ £27.00 per hour

For the month of May 2016 the budgeted output was 12,000 units and actual results were as follows:

Units produced:	12,500
Material used:	38,000 kilos at a total cost of £91,200
Labour:	5,200 hours at a total cost of £59,800
Fixed overhead expenditure was	£132,000

Calculate the following:

- (i) Standard material cost for actual production **(1 mark)**
  - (ii) Total labour cost variance **(3 marks)**
  - (iii) Material usage variance **(3 marks)**
  - (iv) Fixed overhead expenditure variance **(3 marks)**
- (c)** Explain how each of the items in part **(b)** (i) to (iv) will be treated in the accounts. **(5 marks)**
- (Total 25 marks)**

**Q8 (a)** Explain the meaning of the following budgeting terms:

- (i) Marginal cost (2 marks)
- (ii) Flexed budget (2 marks)
- (iii) Fixed overhead absorption rate (2 marks)
- (iv) Adverse material usage variance (2 marks)

**Further information:**

Garnet Ltd manufactures a garden ornament, the standard cost card for which is presented below:

Material	2 kilos @ £3.00 per kilogram
Labour	0.5 hours @ £10.00 per hour

Garnet Ltd is setting its budget for the coming year and is considering three different levels of output.

Level 1: At a selling price of £45 per unit the company believes it can sell 10,000 units and the fixed overheads will comprise the following:

Rent	£100,000
Supervision	£44,000
Depreciation	£60,000

Heat light and power is a semi-variable cost with a fixed element of £30,000 per year and a variable cost of £1.50 per unit.

Level 2: If the selling price is reduced by 5%, the company believes it will be possible to sell an additional 2,000 units with no increase in fixed costs.

Level 3: If the selling price is reduced by 10%, the company believes it can sell 15,000 units but this will require an additional supervisor who will cost £22,000 per annum and an additional machine costing £300,000 which will be depreciated over a ten-year period.

**(b)** Prepare a budget for each of the three levels of output, showing clearly the total contribution and profit earned at each level. (9 marks)

**(c)** The owners of Garnet Ltd have asked you to:

- (i) Identify the advantages and disadvantages of each level of output. (6 marks)
  - (ii) Recommend which level of output is the best course of action for Garnet Ltd. (2 marks)
- (Total 25 marks)**

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**End of question paper**