LCCI International Qualifications from EDI

Series 3 Examination 2011

COST ACCOUNTING

Level 3

Thursday 2 June

Subject Code: 3017

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 answers must be correctly numbered but need not be in numerical order.
- Workings must be shown.
- Presentation is important.
- 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, which manufactures two products for the food industry (Product Aye and Product Bee), produces its budgets on a weekly basis. Each product contains three ingredients (ingredient P, Q and R) which are mixed together in the manufacturing process. The finished products contain the following ingredient proportions by weight:

Product	Ingredient P	Ingredient Q	Ingredient R
Aye	30%	30%	40%
Bee	20%	30%	50%

Products are produced in batch sizes of 50 units and the finished product batch weights are expected to be:

Product Aye	6kg
Product Bee	9kg

During the manufacturing process ingredient P is subject to a 10% weight loss, ingredient Q subject to a 40% weight loss and ingredient R suffers no loss.

The following orders have been received for week 25.

Products	Mon	Tues	Weds	Thurs	Fri
Aye (units)	600	800	900	500	400
Bee (units)	300	400	500	300	200

Ingredient P is ordered weekly in advance for a daily JIT delivery on the morning of the day of manufacture. No stock of this ingredient is kept.

Ingredient Q is ordered weekly in advance. The complete week's order being delivered on the Monday morning. The company keeps a stock level, at the end of the week, equivalent to 20% of the week's consumption. Stock level at the end of week 24 is 40 kg.

Ingredient R ordering is based on a reorder level of 600kg and a reorder quantity of 500kg. A delivery lead time of one week is expected. Stock level at the end of week 24 is 1,050kg.

REQUIRED

(a) Determine, for week 25:

(i) the purchase order quantities for Ingredients P, Q and R
(ii) the daily delivery schedule for Ingredient P.

(16 marks)

(b) Briefly explain the principles of a just-in-time approach to stock management.

(4 marks)

(Total 20 marks)

QUESTION 2

Luboil Ltd uses a process system to jointly produce its three main products, (Products A, B and C). By-product D is also produced during the process. After split off, the three main products are filled into containers prior to sale whereas by-product D is sold direct with no additional cost.

Information regarding the joint process for the month of May is as follows:

Input

Material Y	4,000 litres at £1.20 per litre
Material Z	8,000 litres at £0.90 per litre
Direct labour	625 hours at £8.00 per hour

Overheads are absorbed at £12 per direct hour

Output

Product	**Quantity**	**Selling price per kg**
Product A	3,600 litres	£5 per 1 litre container
Product B	3,400 litres	£15 per 5 litre container
Product C	3,000 litres	£30 per 10 litre container litre
By-Product D	800 litres	£1 per litre

Process losses (waste), which are as expected, are disposed of at a cost of £0.50 per litre.

Containers for the three products A, B and C cost £0.50, £1.00 and £2.00 each respectively.
All containers can be filled at the rate of 200 litres per direct labour hour.

REQUIRED

(a) For the month of May, prepare the account for the joint process using each of the following methods of apportioning joint costs to products:

(i) Net sales value
(ii) Physical quantity.

(14 marks)

(b) Define the terms normal loss, abnormal loss and abnormal gain and contrast briefly their accounting treatment.

(6 marks)

(Total 20 marks)

QUESTION 3

A company uses two different raw materials (RM1 & RM2) which it obtains from an outside supplier. The following information is provided relating to each raw material:

Raw Material RM1

Order quantity 2,000 kg
Purchase price £8.00 per kg
Stock holding costs are 20% of the average stockholding per annum.
The lead time for delivery can vary between 4 and 10 days and the rate of usage varies between 30kg and 40kg per day. The company has a policy of holding safety stock.

REQUIRED

(a) For raw material RM1 calculate:

(i) the reorder level
(ii) the minimum and maximum stock control levels
(iii) the annual stock holding costs.

(8 marks)

The company maintains stock records that clearly show the physical stock, allocated stock, amount on order and free stock.

The stock record card for raw material RM2 recorded the following information and balances at the beginning of month 6:

Reorder level	500kg of free stock
Reorder quantity	400kg
Physical stock in stores	250kg
Allocated stock	50kg
Amount on order	400kg

The following transactions relating to raw material RM2 took place in month 6:

Date

2nd	40kg allocated to job number 121
3rd	50kg issued to job number 116 (previously allocated)
4th	80kg issued to job number 122 (not previously allocated)
8th	Materials ordered at end of month 5 received
10th	50kg allocated to job number 117
15th	100kg returned to supplier as faulty. Supplier agreed to replace
20th	10kg of surplus material from job number 116 returned to stock
27th	Supplier replaced material returned on 15th of month.

REQUIRED

(b) Write up the detailed stock record card for raw material RM2 for month 6.

(8 marks)

(c) Briefly explain the meaning of:

(i) re-order level
(ii) allocated stock
(iii) free stock.

(4 marks)

(Total 20 marks)

QUESTION 4

A company, which produces three products for the motor industry, has just completed its budget for its first period of trading. The summary of the budgeted profit and loss account for this period is set out below:

	£	£
Sales: Product A	400,000	
Product B	300,000	
Product C	100,000	800,000
Less: Variable costs	480,000	
Fixed costs	200,000	680,000
Net Profit		120,000

REQUIRED

Assuming that the above sales prices, mix and existing cost structure will remain the same at increased output levels.

(a) Calculate the contribution/sales ratio.

(2 marks)

(b) Calculate the break-even sales revenue.

(2 marks)

(c) Calculate the sales revenue that will be required to achieve a target profit of £160,000.

(2 marks)

(d) Calculate the profit that will result from expected sales revenue of £1,000,000.

(2 marks)

(e) Draw a contribution break-even chart for the budgeted sales mix. Indicate clearly on the chart the contribution area, the break-even revenue and the target profit. The chart should start at zero and extend up to £1,200,000 sales revenue.

(8 marks)

The company is considering reducing its sale prices by 10%.

REQUIRED

(f) Calculate the sales revenue required, based on the budgeted sales mix and existing costs to achieve the target profit of £160,000.

(4 marks)

(Total 20 marks)

QUESTION 5

The standard production costs of a company's single product are:

Direct material per unit	10 kg @ £4 per kg
Direct labour per unit	2 hours @ £8 per hour
Fixed overheads	£12 per direct labour hour

Budgeted production and sales for month 5 were 500 units and the budgeted selling price was £100 per unit.

Actual sales and costs recorded in month 5 were as follows:

Sales	520 units
Revenue from sales	£49,400
Direct material used	4,250kg at a total cost of £18,600
Direct labour	915 hours at a total cost of £6,920
Fixed overheads	£11,880

All production was sold during the period and there was no opening stock at the beginning of month 5.

REQUIRED

For the month 5:

(a) Calculate:
- (i) the budgeted gross profit
- (ii) the actual gross profit.

(2 marks)

(b) Calculate the following production ratios (to two decimal places):
- (i) Efficiency
- (ii) Capacity.

(4 marks)

(c) Calculate the following variances:
- (i) Selling price
- (ii) Sales volume profit
- (iii) Direct material price
- (iv) Direct material usage
- (v) Direct labour rate
- (vi) Direct labour efficiency
- (vii) Fixed production overhead expenditure
- (viii) Fixed production overhead volume.

(10 marks)

(d) Reconcile the budgeted gross profit with the actual gross profit using the variances calculated in part (c).

(4 marks)

(Total 20 marks)

