The budgeting process

Outline:
(a) the objectives of budgetary planning and control systems; (7 marks)
(b) the organization required for the preparation of a master budget. (10 marks)
(Total 17 marks)

ACCA Level 1 Costing

The preparation of budgets is a lengthy process which requires great care if the ultimate master budget is to be useful for the purposes of management control within an organization.

You are required:
(a) to identify and to explain briefly the stages involved in the preparation of budgets identifying separately the roles of managers and the budget committee; (8 marks)
(b) to explain how the use of spreadsheets may improve the efficiency of the budget preparation process. (7 marks)
(Total 15 marks)

CIMA Stage 1 Accounting

What is zero-base budgeting and how does it differ from other more traditional forms of budgeting? Discuss the applicability of zero-base budgeting to profit-orientated organizations.

ACCA Level 2 Management Accounting

The chief executive of your organization has recently seen a reference to zero-base budgeting. He has asked for more details of the technique.

You are required to prepare a report for him explaining:
(a) what zero-base budgeting is and to which areas it can best be applied;
(b) what advantages the technique has over traditional type budgeting systems; and
(c) how the organization might introduce such a technique. (20 marks)

CIMA P3 Management Accounting

Prepare brief notes about zero-base budgeting covering the following topics:
(a) what zero-base budgeting means;
(b) how zero-base budgeting would operate;
(c) what problems might be met in introducing zero-base budgeting;
(d) what special advantages could be expected from zero-base budgeting, as compared with more traditional budgeting methods, for an organization operating in an economic recession. (20 marks)

CIMA P3 Management Accounting

A budgetary planning and control system may include many individual budgets which are integrated into a ‘master budget’.
You are required to outline and briefly explain with reasons the steps which should normally be taken in the preparation of master budgets in a manufacturing company, indicating the main budgets which you think should normally be prepared.

(12 marks)

ICAEW Management Accounting

The managing director of your company believes that the existing annual budget system is costly to operate and produces unsatisfactory results due to: long preparation period; business decisions being made throughout the year; unpredictable changes in the rate of general inflation; sudden changes in the availability and price of raw materials. He has read about rolling budgets and wonders whether these might be more useful for his decision-making.

You are required, as the management accountant, to prepare a paper for him covering the following areas.

(a) a brief explanation of rolling budgets; (4 marks)
(b) how a rolling budget system would operate; (4 marks)
(c) three significant advantages of a rolling budget system; (6 marks)
(d) three problems likely to be encountered in using a rolling budget system (6 marks)

CIMA P3 Management Accounting

Explain the specific roles of planning, motivation and evaluation in a system of budgetary control. (7 marks)

ACCA Level 2 Management Accounting

Question IM 15.8

Advanced

X plc manufactures Product X using three different raw materials. The product details are as follows:

Selling price per unit £250

Material A 3 kgs material price £3.50 per kg
Material B 2 kgs material price £5.00 per kg
Material C 4 kgs material price £4.50 per kg
Direct labour 8 hours labour rate £8.00 per hour

The company is considering its budgets for next year and has made the following estimates of sales demand for Product X for July to October:

<table>
<thead>
<tr>
<th>July</th>
<th>August</th>
<th>September</th>
<th>October</th>
</tr>
</thead>
<tbody>
<tr>
<td>400 units</td>
<td>300 units</td>
<td>600 units</td>
<td>450 units</td>
</tr>
</tbody>
</table>

It is company policy to hold stocks of finished goods at the end of each month equal to 50% of the following month’s sales demand, and it is expected that the stock at the start of the budget period will meet this policy.

At the end of the production process the products are tested: it is usual for 10% of those tested to be faulty. It is not possible to rectify these faulty units.

Raw material stocks are expected to be as follows on 1 July:

Material A 1000 kgs
Material B 400 kgs
Material C 600 kgs

Stocks are to be increased by 20% in July, and then remain at their new level for the foreseeable future.

Labour is paid on an hourly rate based on attendance. In addition to the unit direct labour hours shown above, 20% of attendance time is spent on tasks which support production activity.
Requirements:
(a) Prepare the following budgets for the quarter from July to September inclusive:
   (i) sales budget in quantity and value;
   (ii) production budget in units;
   (iii) raw material usage budget in kgs;
   (iv) raw material purchases budget in kgs and value;
   (v) labour requirements budget in hours and value. (16 marks)
(b) Explain the term ‘principal budget factor’ and why its identification is an
    important part of the budget preparation process. (3 marks)
(c) Explain clearly, using data from part (a) above, how you would construct a
    spreadsheet to produce the labour requirements budget for August. Include a
    specimen cell layout diagram containing formulae which would illustrate the
    basis for the spreadsheet. (6 marks)
    (Total 25 marks)

CIMA Stage 2 Operational Cost Accounting

D Limited is preparing its annual budgets for the year to 31 December 2001. It man-
ufactures and sells one product, which has a selling price of £150. The marketing
director believes that the price can be increased to £160 with effect from 1 July 2001
and that at this price the sales volume for each quarter of 2001 will be as follows:

<table>
<thead>
<tr>
<th>Sales volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quarter 1</td>
</tr>
<tr>
<td>Quarter 2</td>
</tr>
<tr>
<td>Quarter 3</td>
</tr>
<tr>
<td>Quarter 4</td>
</tr>
</tbody>
</table>

Sales for each quarter of 2002 are expected to be 40 000 units.

Each unit of the finished product which is manufactured requires four units of
component R and three units of component T, together with a body shell S. These
items are purchased from an outside supplier. Currently prices are:

<table>
<thead>
<tr>
<th>Item</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component R</td>
<td>£8.00 each</td>
</tr>
<tr>
<td>Component T</td>
<td>5.00 each</td>
</tr>
<tr>
<td>Shell S</td>
<td>£30.00 each</td>
</tr>
</tbody>
</table>

The components are expected to increase in price by 10% with effect from 1 April
2001; no change is expected in the price of the shell.

Assembly of the shell and components into the finished product requires 6
labour hours: labour is currently paid £5.00 per hour. A 4% increase in wage costs is
anticipated to take effect from 1 October 2001.

Variable overhead costs are expected to be £10 per unit for the whole of 2001; fixed
production overhead costs are expected to be £240 000 for the year, and are absorbed
on a per unit basis. Stocks on 31 December 2000 are expected to be as follows:

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finished units</td>
<td>9000 units</td>
</tr>
<tr>
<td>Component R</td>
<td>3000 units</td>
</tr>
<tr>
<td>Component T</td>
<td>5500 units</td>
</tr>
<tr>
<td>Shell S</td>
<td>500 units</td>
</tr>
</tbody>
</table>

Closing stocks at the end of each quarter are to be as follows:

<table>
<thead>
<tr>
<th>Item</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finished units</td>
<td>10% of next quarter’s sales</td>
</tr>
<tr>
<td>Component R</td>
<td>20% of next quarter’s production requirements</td>
</tr>
<tr>
<td>Component T</td>
<td>15% of next quarter’s production requirements</td>
</tr>
<tr>
<td>Shell S</td>
<td>10% of next quarter’s production requirements</td>
</tr>
</tbody>
</table>
Requirement:
(a) Prepare the following budgets of D Limited for the year ending 31 December 2001, showing values for each quarter and the year in total:
   (i) sales budget (in £s and units)
   (ii) production budget (in units)
   (iii) material usage budget (in units)
   (iv) production cost budget (in £s). (15 marks)
(b) Sales are often considered to be the principal budget factor of an organisation.

Requirement:
Explain the meaning of the ‘principal budget factor’ and, assuming that it is sales, explain how sales may be forecast making appropriate reference to the use of statistical techniques and the use of microcomputers. (10 marks)

CIMA Stage 2 Operational Cost Accounting

The following data and estimates are available for ABC Limited for June, July and August.

<table>
<thead>
<tr>
<th></th>
<th>June (£)</th>
<th>July (£)</th>
<th>August (£)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>45 000</td>
<td>50 000</td>
<td>60 000</td>
</tr>
<tr>
<td>Wages</td>
<td>12 000</td>
<td>13 000</td>
<td>14 500</td>
</tr>
<tr>
<td>Overheads</td>
<td>8 500</td>
<td>9 500</td>
<td>9 000</td>
</tr>
</tbody>
</table>

The following information is available regarding direct materials:

<table>
<thead>
<tr>
<th></th>
<th>June (£)</th>
<th>July (£)</th>
<th>August (£)</th>
<th>September (£)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening stock</td>
<td>5000</td>
<td>3500</td>
<td>6 000</td>
<td>4000</td>
</tr>
<tr>
<td>Material usage</td>
<td>8000</td>
<td>9000</td>
<td>10 000</td>
<td></td>
</tr>
</tbody>
</table>
A company is to carry out a major modernization of its factory commencing in two weeks time. During the modernization, which is expected to take four weeks to complete, no production of the company’s single product will be possible.

The following additional information is available:
(i) Sales/Debtors: Demand for the product at £100 per unit is expected to continue at 800 units per week, the level of sales achieved for the last four weeks, for one further week. It is then expected to reduce to 700 units per week for three weeks, before rising to a level of 900 units per week where it is expected to remain for several weeks. All sales are on credit, 50% being received in cash in the week following the week of sale and 50% in the week after that.

(ii) Production/Finished goods stock: Production will be at a level of 1200 units per week for the next two weeks. Finished goods stock is 2800 units at the beginning of week 1.

(iii) Raw material stock: Raw material stock is £36 000 at the beginning of week 1. This will be increased by the end of week 1 to £40 000 and reduced to £10 000 by the end of week 2.

(iv) Costs

<table>
<thead>
<tr>
<th>(£ per unit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable:</td>
</tr>
<tr>
<td>Raw material</td>
</tr>
<tr>
<td>Direct labour</td>
</tr>
<tr>
<td>Overhead</td>
</tr>
<tr>
<td>Fixed:</td>
</tr>
<tr>
<td>Overhead</td>
</tr>
</tbody>
</table>

Fixed overheads have been apportioned to units on the basis of the normal output level of 800 units per week and include depreciation of £4000 per week.

In addition to the above unit costs, overtime premiums of £5000 per week will be incurred in weeks 1 and 2. During the modernization variable costs will be avoided, apart from direct labour which will be incurred at the level equivalent to 800 units production per week. Outlays on fixed overheads will be reduced by £4000 per week.

(v) Payments: Creditors for raw materials, which stand at £27 000 at the beginning of week 1, are paid in the week following purchase. All other payments are made in the week in which the liability is incurred.

(vi) Liquidity: The company has a bank overdraft balance of £39 000 at the beginning of week 1 and an overdraft limit of £50 000.

The company is anxious to establish the liquidity situation over the modernization period, excluding the requirements for finance for the modernization itself.

Required:
(a) Prepare a weekly cash budget covering the six-week period up to the planned completion of the modernization. (15 marks)
(b) Comment briefly upon any matters concerning the liquidity situation which you feel should be drawn to the attention of management. (7 marks)

(Total 22 marks)

ACCA Level 1 Costing
The Rosrock Housing Association has two types of housing estate in the Rosburgh area (A and B).

The following information is available:
(i) The association has its own squad of painters who carry out painting and decorating work on the housing estates. The estimated cost for each house in which the work will be done in 2001 is as follows: Painting

<table>
<thead>
<tr>
<th>(£)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Direct material cost</td>
</tr>
<tr>
<td>(b) Direct labour cost</td>
</tr>
</tbody>
</table>

(c) In 2001 overhead cost is absorbed at 20% on direct material cost plus 100% on direct labour cost. Only 30% of material related overhead and 33⅓% of labour related overhead is variable, the remainder is fixed overhead and the absorption rate is arrived at using the budgeted number of houses which require painting and decorating each year.

(d) Fixed overhead may be analysed into:
1. Items avoidable on cessation of the service 30%
2. Depreciation of equipment and premises 20%
3. Apportionment of head office costs 50%

(e) Direct material and direct labour cost are wholly variable.

(ii) The total number of houses of each type and the percentage requiring painting and decorating each year is as follows:

<table>
<thead>
<tr>
<th>Estate</th>
<th>Type A</th>
<th>Estate</th>
<th>Type B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of houses</td>
<td>500</td>
<td>600</td>
<td></td>
</tr>
<tr>
<td>Percentage of houses requiring maintenance each year</td>
<td>30%</td>
<td>20%</td>
<td></td>
</tr>
</tbody>
</table>

(iii) Where relevant, all future costs are expected to increase each year by a fixed percentage of the previous year’s level due to changes in prices and wage rates as follows:

<table>
<thead>
<tr>
<th></th>
<th>Direct material cost</th>
<th>Direct labour cost</th>
<th>Overhead cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage</td>
<td>5%</td>
<td>7%</td>
<td>6%</td>
</tr>
</tbody>
</table>

(iv) Forecast balances at 31 December 2000 and other cash flow timing information is as follows:
(a) Creditors for materials: £2100. Credit purchases are 90% of purchases, the remainder being cash purchases. The credit purchases outstanding at a year end are estimated at 10% of the annual materials purchased on credit. There are no materials on hand on 31 December 2000.
(b) Labour costs accrued: £2800. Labour costs outstanding at a year end are estimated at 4% of the annual total earnings for the year.
(c) Creditors for variable overheads: £600. Variable overheads are paid 60% in the month of incidence and 40% in the month following. Variable overheads are deemed to accrue evenly each month throughout the year.
(d) Fixed overheads are paid in twelve equal amounts with no accruals or prepayments.

Required:
(a) Prepare a cash budget for the existing painting and decorating function for the period 1 January 2001 to 31 December 2003 which shows the cash flows for each of the years 2001, 2002 and 2003. (Calculations should be rounded to the nearest whole £.) (14 marks)
(b) An outside company has offered to undertake all painting and decorating work for a three year period 2001 to 2003 for a fixed fee of £135 000 per annum.
(i) Calculate whether the offer should be accepted on financial grounds using the information available in the question. (2 marks)
(ii) List and comment upon other factors which should be taken into account by Rosrock Housing Association management when considering this offer. (6 marks)

ACCA Level 2 Cost and Management Accounting

A company, which manufactures a range of consumer products, is preparing the direct labour budget for one of its factories. Three products are manufactured in the factory. Each product passes through two stages: filling and packing.

Direct labour efficiency standards are set for each stage. The standards are based upon the number of units expected to be manufactured per hour of direct labour. Current standards are:

<table>
<thead>
<tr>
<th></th>
<th>Product 1 (units/hour)</th>
<th>Product 2 (units/hour)</th>
<th>Product 3 (units/hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filling</td>
<td>125</td>
<td>300</td>
<td>250</td>
</tr>
<tr>
<td>Packing</td>
<td>95</td>
<td>100</td>
<td>95</td>
</tr>
</tbody>
</table>

Budgeted sales of the three products are:

Product 1: 850,000 units
Product 2: 1,500,000 units
Product 3: 510,000 units

Production will be at the same level each month, and will be sufficient to enable finished goods stocks at the end of the budget year to be:

Product 1: 200,000 units
Product 2: 255,000 units
Product 3: 70,000 units

Stocks at the beginning of the budget year are expected to be:

Product 1: 100,000 units
Product 2: 210,000 units
Product 3: 105,000 units

After completion of the filling stage, 5% of the output of Products 1 and 3 is expected to be rejected and destroyed. The cost of such rejects is treated as a normal loss.

A single direct labour hour rate is established for the factory as a whole. The total payroll cost of direct labour personnel is included in the direct labour rate. Hours of direct labour personnel are budgeted to be split as follows:

<table>
<thead>
<tr>
<th></th>
<th>% of Total time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct work</td>
<td>80</td>
</tr>
<tr>
<td>Holidays (other, than public holidays)</td>
<td>7</td>
</tr>
<tr>
<td>Sickness</td>
<td>3</td>
</tr>
<tr>
<td>Idle time</td>
<td>4</td>
</tr>
<tr>
<td>Cleaning</td>
<td>3</td>
</tr>
<tr>
<td>Training</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>100%</td>
</tr>
</tbody>
</table>

All direct labour personnel are employed on a full-time basis to work a basic 35 hour, 5 day, week. Overtime is to be budgeted at an average of 3 hours per
employee, per week. Overtime is paid at a premium of 25% over the basic hourly rate of £4 per hour. There will be 250 possible working days during the year. You are to assume that employees are paid for exactly 52 weeks in the year.

Required:
Calculate:
(a) The number of full-time direct employees required during the budget year. 

(b) The direct labour rate (£ per hour, to 2 decimal places).

(c) The direct labour cost for each product (pence per unit to 2 decimal places).

(Total 25 marks)

ACCA Level 1 Costing