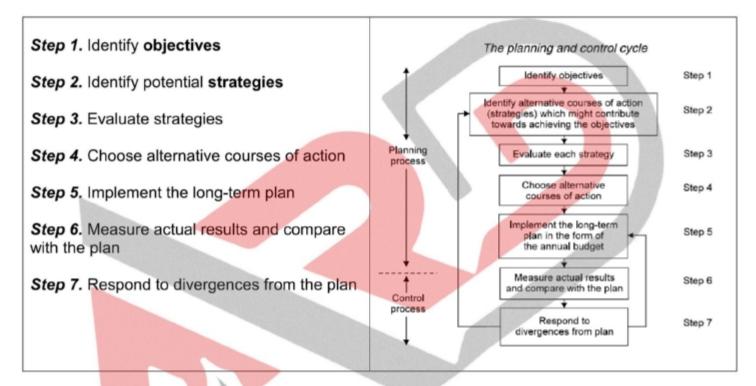
# 14 - Budgeting and Control

A budget is a quantified plan of action for a forthcoming accounting period.

# The planning and control cycle

The planning and control cycle has seven steps.



# Objectives of budgetary systems

- Ensure the achievement of the organisation's objectives
- Compel planning
- Communicate ideas and plans
- Coordinate activities
- Provide a framework for responsibility accounting
- Establish a system of control
- Motivate employees to improve their performance

### Behavioural implications of budgeting

- (a) The **managers who set the budget** or standards are **often not the managers** who are then made **responsible for achieving budget targets.**
- (b) The goals of the organisation as a whole, as expressed in a budget, may not coincide with the personal aspirations of individual managers.
- (c) Control is applied at different stages by different people. A supervisor might get weekly control reports, and act on them; his superior might get monthly control reports, and decide to take different control action. Different managers can get in each others' way, and resent the interference from others.

Imposed style of budgeting (top-down budgeting)

In this approach to budgeting, **top management prepare a budget with little or no input from operating personnel** which is then imposed upon the employees who have to work to the budgeted figures.

The times when imposed budgets are effective are as follows.

- In newly-formed organisations
- In very small businesses
- During periods of economic hardship
- · When operational managers lack budgeting skills
- When the organisation's different units require precise coordination

## **Advantages**

- Strategic plans are likely to be incorporated into planned activities
- They enhance the coordination between the plans and objectives of divisions
- They use senior management's awareness of total resource availability
- They decrease the input from inexperienced or uninformed lower-level employees
- They decrease the period of time taken to draw up the budgets

# Disadvantages

- Dissatisfaction, defensiveness and low morale amongst employees
- The feeling of team spirit may disappear
- The acceptance of organisational goals and objectives could be limited
- The feeling of the budget as a punitive device could arise
- Unachievable budgets for overseas divisions could result if consideration is not given to local operating and political environments
- Lower-level management initiative may be stifled

## Participative style of budgeting (bottom-up budgeting)

In this approach to budgeting, budgets are developed by lower-level managers who then submit the budgets to their superiors. The budgets are based on the lower-level managers' perceptions of what is achievable and the associated necessary resources.

**Participative budgets** are effective in the following circumstances.

- In well-established organisations
- In very large businesses
- During periods of economic affluence
- When operational managers have strong budgeting skills
- When the organisation's different units act autonomously

### Advantages

- They are based on information from employees most familiar with the department
- Knowledge spread among several levels of management is pulled together
- Morale and motivation is improved
- They increase operational managers' commitment to organisational objectives
- In general they are more realistic
- Co-ordination between units is improved
- Specific resource requirements are included

• Senior managers' overview is mixed with operational level details

## **Disadvantages**

- They consume more time
- Changes implemented by senior management may cause dissatisfaction
- . Budgets may be unachievable if managers' are not qualified to participate
- They may cause managers to introduce budgetary slack
- They can support 'empire building' by subordinates
- · An earlier start to the budgeting process could be required

## Incremental budgeting

The traditional approach to budgeting, known as **incremental budgeting**, bases the budget on the current year's results plus an extra amount for estimated growth or **inflation** next year. It encourages slack and wasteful spending to creep into budgets.

**Incremental budgeting** is so called because it is concerned mainly with the increments in costs and revenues which will occur in the coming period.

A **fixed budget** is a budget which is designed to remain unchanged regardless of the volume of output or sales achieved.

## Flexible budgets

Comparison of a fixed budget with the actual results for a different level of activity is of little use for control purposes. **Flexible budgets** should be used to show what cost and revenues should have been for the actual level of activity.

A **flexible budget** is a budget which, by recognising different cost behaviour patterns, is designed to change as volume of activity changes.

## Zero based budgetary systems

The principle behind **zero based budgeting (ZBB)** is that the budget for each cost centre should be made from 'scratch' or zero. Every item of expenditure must be justified in its entirety in order to be included in the next year's budget.

**Zero based budgeting** involves preparing a budget for each cost centre from a zero base. Every item of expenditure has then to be justified in its entirety in order to be included in the next year's budget.

#### Limiting factor in Budgeting

The factor that **limits the scale of operations**, this is usually sales demand, but it may be production capacity where demand is high. Budgeting cannot proceed until the budget for the limiting factor has been prepared, since this affects all the other budgets.

# **Budget Formats**

# Finished Goods Production / Purchase Budget (Units)

**Budgeted Sales Qty** XXX Add: Required Closing Inventory XXX Add: Losses (If any) XXX (XXX) Less: Opening Inventory FG Production / Purchase Qty Budget XXX Multiply by X Production / Purchase cost per unit \$X FG Production / Purchase cost budget (\$) **\$XXXX** 

# Raw Material Purchase Qty Budget (Kgs / Litres etc)

Material Usage Budget / Production requirements (Production units x Mat required / unit)	XXX
Add: Required Closing Inventory	XXX
Add: Expected Loss (If any)	XXX
Less: Opening Inventory	(XXX)
Raw Mat <mark>erial P</mark> urchase Qty Budget	XXX
Multiply by	Х
Raw Material Cost per kg / Litre	\$X
Raw Material Purchase Cost Budget (\$)	\$XXXX

# Sales Budget

Month	Jan	Feb	Mar
Expected Sales Units	XXX	XXX	XXX
Multiply by			
Expected Selling Price	X	X	X
Budgeted Sales Revenue	XXX	XXX	XXX

# Trade Receivable Budget

Month	Jan	Feb	Mar
			1
Opening Trade Receivables	XX	XX	XX
Add: Credit Sales	XXX	XXX	XXX
Less: Bank	(XX)	(XX)	(XX)
Discount Allowed	(X)	(X)	(X)
Return Inwards	(X)	(X)	(X)
Bad Debts	(X)	(X)	(X)
Closing Trade Receivables	XX	XX	XX

# Flexible Budget Operating Statement

Flexed Budget			Actual		Variance	
(Actual Qty x Standard Per	Unit)		(Actual Qty x Actual Per Unit)			
	\$	\$		\$	\$	\$
Sales Revenue		XXX	Sales Revenue		XXX	XX Fav
Less: Direct Material	XX		Less: Direct Material	XX		X Adv
Direct Labour	XX		Direct Labour	XX		X Fav
Variable Overhead	XX		Variable Overhead	XX		X Adv
Fixed Overhead	XX		Fixed Overhead	XX		X Adv
		(XX)			(XX)	
Flexed Budget Profit		XX	Actual Profit		XX	XX Fav

## Cash Budget

Cash budget / forecast is one of the most important budgets that an organization prepares because liquidity is more important for survival than profitability.

ARD Ltd

Cash Budget for the year 2016

	JAN	FEB	MAR
Receipts / Inflows	- 4		
Cash Sales	-450	XX	XX
Collection from Debtors	XX	XX	XX
Sale of NCA	XX	-	XX
Issue of Share / Loans	XX	XX	-
Other Receipts	XX		XX
Total Receipts	XX	XX	XX
	100		
Payments / Outflows	100		
Cash Purchase	XX		XX
Payment to creditors	XX	XX	XX
Cash Drawing	-	XX	XX
Purchase of NCA	XX	XX	100
Repayment of Loan / Debentures	XX	- 4	XX
Other payments	-	XX	XX
Total Payments	XX	XX	XX
Net Cash flows / Surplus (Deficit) (Total Receipt – Total Payments)	хх	(XX)	XX
Add: Opening Cash Balance	XX	XX	XX
Closing Cash Balance	XX	XX	XX

## Uses of Cash Budgets

- It helps to identify short and long term cash needs so that appropriate action can be taken
- It determines future ability of the business to pay trade payables and other debts early to avail cash discounts
- It helps to identify how much credit can be extended to customers before falling into liquidity problems
- It reveals any expected surplus of cash which may be invested or loaned for a short time period
- > It ensures sufficient cash is available required to carry out business operations

# Action plans for Cash Shortage or Surplus

Cash Position	Appropriate management action
Short term surplus	<ul> <li>Pay trade payables early to avail discounts</li> <li>Bulk purchase to avail trade discounts</li> <li>Attempt to increase sales by extending credit to trade receivables</li> <li>Make short-term investments</li> </ul>
Short term deficits	<ul> <li>Re-negotiate overdraft limit</li> <li>Give incentives to customers to buy in cash</li> <li>Offer cash discounts to debtors for early payments</li> <li>Negotiate longer credit from suppliers (if possible)</li> </ul>
Long term surplus	<ul> <li>Make investments on long term basis</li> <li>Expand level of operations</li> <li>Replace or improve non-current assets</li> <li>Redemption of preference share or debentures</li> </ul>
Long term deficit	<ul> <li>Issue of ordinary / preference shares / additional investment by owner</li> <li>Arrange long term bank loan</li> <li>Issue of debentures</li> <li>Sale of surplus non-current assets</li> <li>Consider shutdown or divestment opportunities</li> </ul>

# 14 - Budgeting

Q1. The directors of Sperrabuck Ltd were concerned about the company's cash flow. They requested the accountant to prepare a cash budget for the four months ending 31 October 2005.

The following information was available:

)	Actual sales	
	2005	\$
	May	88 000
	June	110 000
	Budgeted sales	
	July	82 800
	August	87 400
	September	89 700
	October	101 250
	November	120 000
	December	108 000

(ii) Sales are made as follows:

40% of total sales are for cash

50% of total sales are on credit and are paid for in the month after sale

10% of total sales are on credit and are paid for two months after sale

- (iii) Customers purchasing on credit are allowed a discount of 2% if they pay within one month of purchase.
- (iv) Supplies are purchased two months before sale and paid for one month after purchase.
- (v) The selling price is fixed by adding a mark-up of 40% to the cost of goods sold.
- (vi) Wages of \$8000 per month are paid in the month in which they are earned. It is expected that wages will be increased by a pay award of 5% from 1 September 2005.
- (vii) Staff are paid a bonus of 4% on all sales in excess of \$80 000 each month. The bonus is paid in the following month.
- (viii) Other expenses currently amount to \$7000 per month and are paid in the month in which they are incurred. These expenses are expected to increase by 8% from 1 September 2005.
  - (ix) The company will pay a final dividend of \$30 000 in August 2005.
  - (x) Sperrabuck Ltd will purchase fixed assets for \$20 000 in September 2005.
  - (xi) The balance at bank on 30 June 2005 is \$12 000.

#### REQUIRED

- (a) Prepare a cash budget for Sperrabuck Ltd for each of the four months July, August, September and October 2005. Prepare the budget in columnar form and make all calculations to the nearest \$.
  [28]
- (b) Prepare an extract from the budgeted Balance Sheet at 31 October 2005 showing the current assets and current liabilities as far as the information is available.
  [6]
- (c) State three benefits which may be obtained from the preparation of budgets. [3]
- (d) State three advantages that may arise from preparing budgets from standard costs. [3]

Q2. The following budgeted information is provided for Notlimah Ltd, for the six months ending 30 November 2008. The business assembles cardboard boxes.

Month	Sales	Materials	Wages	Other overheads
	\$	\$	\$	\$
June	46 000	15 000	10 000	24 000
July	47 000	15 600	10 000	24 000
August	48 000	16 000	10 100	26 000
September	52 000	17 000	10 600	24 500
October	56 000	18 600	10 750	24 750
November	60 000	21 000	11 500	26 200

#### Additional information:

- 1 It is estimated that the bank balance at 1 September will be \$1350 overdrawn.
- 2 10 % of all sales are expected to be cash sales.
- 3 Customers who settle their accounts within one month will receive a 5 % discount. Settlement after one month will be strictly net.
- 4 It is believed that half of all credit customers will settle their debts within one month and that the remainder will pay the following month.
- 5 All materials will be paid for in the month following order, so that a cash discount of 2½% can be claimed.
- 6 Other overheads will be paid for in the month following supply.
- 7 The workforce was granted a 5 % pay increase which will come into force on 1 November 2008. The pay rise has not been included in the budgeted figures. Wages are paid in the month following that in which they are earned.
- 8 The half-yearly interest on 400 000 6 % debentures of \$1 each is due to be paid on 15 October 2008.
- 9 1 000 000 ordinary shares of \$0.10 were issued in July 2007 at a price of \$0.24 each. The final call of 25% is due on 1 November 2008.
- 10 A new folding machine costing \$20 000 will be delivered on 1 September. It will be paid for in two equal instalments on 1 December 2008 and 1 June 2009. It is expected that the machine will be used continuously for the next four years.
- 11 It is estimated that stock at 1 September 2008 will have a value of \$4700 and will rise by \$1000 at 30 November 2008.

#### REQUIRED

- (a) Prepare a cash budget for each of the three months ending 30 September, 31 October and 30 November 2008. [20]
- (b) Prepare a forecast trading and profit and loss account for the three months ending 30 November 2008. [14]
- (c) Explain two differences between a cash budget and a cash flow statement. [4]
- (d) Explain one measure that the managers of a business might adopt if they are faced with a cash deficit in one month of an annual cash budget.
  [2]

Q3. Ada Campellini runs a business which retails high quality clothing. It is particularly busy during the festive season.

The budgeted sales and purchases figures for September 2012 to January 2013 are as follows:

	September	October	November	December	January
	\$	\$	\$	\$	\$
Sales	215 000	225 000	310 000	425 000	195 000
Purchases	175 000	190 000	245 000	135 000	135 000

#### Additional information:

50% of sales are expected to be paid for by cash and these customers will receive a 6% discount.

50% of the **remaining** sales are expected to be paid in the following month and these customers will receive a 3% discount.

The remainder will pay 2 months after the sale.

2 30% of purchases are expected to be paid for in the month of purchase and will receive a 4% discount.

40% of purchases are expected to be paid for in the month after purchase and will receive a 2% discount.

The remainder are paid for 2 months after purchase.

- 3 The inventories held on 1 November 2012 are budgeted at \$180,000. The inventories held on 31 January 2013 are budgeted at \$129,000.
- 4 Total general expenses are budgeted at \$18000 in November 2012 with an expected 10% rise in December and a 15% reduction (on the December total) in January 2013.
  All general expenses are expected to be paid in full in the month in which they occur.
- 5 The depreciation on the non-current assets acquired before November 2012 will be \$1750 per month.
- 6 On 1 November 2012 Ada will acquire a new storage system at a cost of \$24000 and will pay 50% of the cost immediately. The remainder will be paid in equal instalments over the following 12 months without any interest charges.

This new non-current asset will be depreciated at 10% per annum on a monthly basis.

- 7 Ada will make drawings of \$3000 every month except for December 2012. In this month she expects to draw 1.5% of the month's expected sales.
- 8 The bank balance at 1 November 2012 is expected to be \$34850.

#### REQUIRED:

- (a) Prepare a cash budget, in columnar format, for the 3 months commencing with November 2012.
  [30]
- (b) Prepare a budgeted income statement (profit and loss account) in as much detail as possible from the given information for this 3 month period ending in January 2013. [10]

# Q4. The managers of Svennsen Ltd provide the following information.

Selected balances at 1 October 2009

	\$
Fixed assets (Net book value)	210 000
Ordinary issued share capital	150 000
Profit and loss account	35 250
Revaluation reserve	25 000
Share premium account	40 000
Stock	1 000

Cash budget for the six months ending 28 February 2010

	Sept \$	Oct \$	Nov \$	Dec \$	Jan \$	Feb \$
Receipts			100			100
Cash sales	4 600	3 700	4 700	4 800	4 600	4 200
Debtors (1 month's credit)	24 000	23 000	18 500	23 500	24 000	23 000
Deptors (2 month's credit)	16 800	19 200	18 400	14 800	18 800	19 200
Sale of fixed assets			8 000	1000		
	45 400	45 900	49 600	43 100	47 400	46 400
Payments						- 1
Creditors (1 month's credit)	22 000	21 000	18 000	21 000	24 000	20 000
General expenses	14 500	16 800	16 600	20 400	17 700	15 900
Ordinary dividend				4 000	- 4	
Purchase of fixed asset			8 500		1000	
	36 500	37 800	43 100	45 400	41 700	35 900
Net cash flow	8 900	8 100	64 500	(2300)	5 700	10 500
Balance b/fwd	(9 250)	(350)	7 750	14 250	<u>11 950</u>	17 650
Balance c/fwd	(350)	7 750	14 250	11 950	17 650	28 150

#### REQUIRED

(a) Explain two measures that might be taken to resolve a forecast cash deficit in one month. [4]

#### Additional information:

1 10 % of sales each month are cash sales.

50 % of sales are expected to be settled one month following the sale.

The remaining 40 % of sales are expected to be settled two months after sale.

- 2 All purchases will be on credit. Suppliers will be paid in the month following purchase.
- 3 General expenses will be paid as incurred.
- 4 A bonus issue of 1 new ordinary share for every 3 held will be made on 1 December 2009. The directors propose that equal amounts are used from the company's capital reserves.
- Fixed assets will be purchased on 1 November 2009 for \$17 000. Half of the cost will be paid on that date, the balance will be paid on 1 April 2010.
- 6 Fixed assets that cost \$20 000 will be sold in November 2009 for \$8000. They will have been depreciated by \$11 000 at the date of sale.

- 7 Fixed assets are depreciated at 10 % per annum on net book value at the balance sheet date.
- 8 Stock at 31 December 2009 was valued at \$2000.

#### REQUIRED

- (b) Prepare a forecast trading and profit and loss account and an appropriation account for the three months ending 31 December 2009 in as much detail as possible. [19]
- (c) Prepare a forecast balance sheet at 31 December 2009 in as much detail as possible. [17]

[Total: 40]

# C5 Echoes plc has the following statement of financial position (balance sheet) at 30 April 2011.

	\$000 Cost	\$000 Depreciation	\$000 N B V
Non-current assets Land and buildings Equipment Motor vehicles  Current assets	1200 230 210 1640	50 90 115 255	1150 140 95 1385
Inventory Trade receivables Prepaid rates and insurance		150 122 8 280	
Current liabilities Trade payables Tax Cash and cash equivalents	75 30 15	120	160 1545
Equity Ordinary shares of \$0.50 each Share premium Retained earnings			800 100 645 1545

Sales and purchases budgets have been produced for Echoes plc for the year ending 30 April 2012 as follows:

	\$000	\$000
	Sales	Purchases
May to February	1060	560
March	100	60
April	100	60
Total	1260	680

Other information is as follows:

1 All sales are on credit.

50% of customers pay in the month after sale and the remaining customers pay in the second month.

On 1 May 2011 the company is introducing a 5% cash discount for customers paying in the month after sale, applicable to sales made on or after that date.

Discount will only be accounted for when funds are received.

- 2 Purchases accrue evenly over the month. The company pays its suppliers 1½ months after receipt of goods.
- 3 The company pays rates six months in advance on 1 June and 1 December each year. Each payment amounts to \$9000.
- 4 The company pays an annual premium for insurance, in advance, on 1 October each year. It is expected that in 2011 the premium will be \$30 000.
- 5 All other selling, distribution and administration payments for the year, including wages and salaries, are expected to amount to \$184 000.
- 6 The company plans to modernise its equipment and upgrade its vehicles during the year.

It plans to sell all the vehicles for \$80 000 and buy new ones at a total cost of \$400 000.

It also plans to sell half the equipment for \$75000 and replace it with new equipment costing \$310000.

- 7 The cost of land and buildings is split \$800000 for the land and \$400000 for the buildings.
- 8 The company provides a full year's depreciation on non-current assets purchased during the year but none in the year of disposal. Annual depreciation rates are:

Buildings 2.5% on cost Equipment 20% on cost

Motor vehicles 30% on net book value

9 The company plans to issue 100 000 new shares at a price of \$1.70 on 1 July 2011 to part fund the purchase of the non-current assets.

It also plans to issue \$300 000 6% debentures, redeemable in 2028, on 1 July 2011. The first interest payment on the debentures will be paid on 30 April 2012.

- 10 Tax is provided for at 20% of profit after finance charges and is paid ten months after the financial year end.
- 11 Inventory is expected to increase by 10% over the year.
- 12 The company intends to pay a dividend of \$0.03 per share on 30 June 2011.

#### REQUIRED

(a) Calculate the bank balance expected on 30 April 2012.

[14]

(b) Prepare the forecast income statement (profit and loss account) for the year ending 30 April 2012. [12]

(c) Prepare the statement of financial position (balance sheet) at 30 April 2012.

[14]

[Total: 40]

Q6. Gala Ltd manufactures one product, the Durrell. Its sales for a six month period are expected to be:

2011	Durrells
July	800
August	1050
September	1400
October	1100
November	950
December	850

On 1 July Gala Ltd expects to have 100 Durrells in inventory. It intends to hold inventory levels of 250 Durrells at the end of July and August, 200 at the end of September and October, and 100 thereafter.

#### REQUIRED

(a) Prepare a monthly production budget for Gala Ltd for the six months July to December. [6]

Each Durrell requires 2 kilos of raw material. Until 31 August this is expected to cost \$4 per kilo and \$4.50 from 1 September to 30 November and \$5 per kilo thereafter.

#### REQUIRED

(b) Prepare a monthly raw materials purchasing budget for the six months July to December. [6]

Selling prices for the Durrell are expected to be \$190 each in July, August and September and \$200 each thereafter.

All sales are on credit.

50% of debtors pay in the month following sale and receive 4% cash discount, and the remainder pay in the second month following sale.

#### REQUIRED

(c) Calculate the expected value of trade receivables on 1 September.

[2]

(d) Prepare a monthly trade receivables budget for the four months September to December.

[21]

(e) State three advantages to Gala Ltd of using budgets.

[3]

- (f) (i) Name one item which may appear in an income statement (profit and loss account) which cannot appear in a cash budget.
  [1]
  - (ii) Name one item which may appear in a cash budget which cannot appear in an income statement (profit and loss account).
    [1]

Q7. Hiemstra Limited manufactures a single product. It operates a flexible budgetary control system.

### REQUIRED

(a) Explain what is meant by flexible budgetary control.

(b) Explain why flexible budgetary control is better than a fixed budget to monitor the costs of a business.
[4]

The budgeted sales in units for the next three months are:

Month	Units
1	1200
2	1400
3	1600

At the start of month 1 it will have 200 units of finished goods in stock. It wishes to reduce the closing stock of finished goods by 20 units a month.

### REQUIRED

(c) Prepare the company's production budget in units for months 1-3. [8]

#### Additional information:

The revenue and cost information for one unit:

Selling price \$29 per unit

Direct material 2 kilograms of material at \$3 per kilogram

Direct labour 0.5 hours at \$10 per hour

Budgeted factory semi-variable costs are:

Output in units Factory overheads

4000 \$31 000

4500 \$33 000

Other budgeted factory fixed costs are \$23 500.

#### REQUIRED

(d) Calculate the break-even point in units and in value. [7]

[3]

#### Additional information:

The actual results for the three-month period were:

Sales 4400 units

Selling price \$28 per unit

Direct material 2 kilograms at \$4 per kilogram

Direct labour 0.4 hours at \$10 per hour

Factory overheads \$36 200

Fixed overheads \$18 000

## REQUIRED

(e) Prepare a flexible budget statement for the three-month period, clearly showing the actual and budgeted data and any variances. [10]

(f) Explain why, despite an increase in units sold, the actual profit was less than the budgeted profit. [8]

Q8. MW Limited manufactures a single product, a Tu. The finance director prepares monthly budgets.

The following budgeted information is available for the first three months of 2015.

- 1 The selling price will be fixed at \$60 per unit. In January 2015 sales are expected to be 24 000 units. It is anticipated that there will be a 5% increase in sales volume in every subsequent month up to April 2015.
- 2 The finished goods inventory level at the end of each month will be maintained at one-third of the expected sales volume in the following month. The inventory of finished goods at 31 December 2014 is expected to be 7500 units with a value of \$242000. The finished goods inventory value at 31 March 2015 is expected to be \$298,000.
- 3 Each unit of Tu requires 10 kilos of raw material. The closing inventory of raw materials each month is expected to meet 20% of the production requirement of the following month. The inventory of raw materials at 31 December 2014 is expected to be 48 000 kilos. The purchase price will remain at \$1.50 per kilo.
- 4 Direct labour for the first three months of 2015 is expected to be \$850,000. Manufacturing overhead is expected to be 50% of direct labour.

#### REQUIRED

- (a) Prepare the sales budget for the period January to March 2015. State the units and revenue for each month.
  [6]
- (b) Prepare the production budget for the period January to March 2015. State the units for each month.
- (c) Prepare the purchases budgets for the period January to March 2015. State the units and cost for each month. [15]
- (d) Prepare the budgeted trading section of the income statement for the three months ending 31 March 2015. [10]