

Management Accounting V

In this section we deal with:

- Budgetary planning and control
- Budget preparation
- Flexible budgeting (Higher Level)

Budgetary Planning and Control

A budget is a financial plan developed by an organisation for a definite period of time, normally an accounting period. The budget fits in with the long-term plan of the organisation.

Budgetary control is a technique where:

1. Actual results are compared with the budget
2. Differences are identified and analysed
3. Appropriate corrective action is taken to ensure that the objectives of the organisation are met.



Advantages of budgeting

The advantages of budgeting include the following:

- Budgeting ensures that planning takes place
- It draws up a plan of expected performance
- The budget defines areas of responsibility. People are likely to work more efficiently when they have clearly defined responsibilities and targets
- The budget acts as a motivator to staff at all levels to achieve their targets
- Budgeting improves communication among staff, encourages teamwork within departments and ensures co-operation between different departments
- Ensures the organisations resources are used as efficiently as possible, and that strict control of costs is achieved
- Enables comparisons to be made between actual figures and budgeted figures

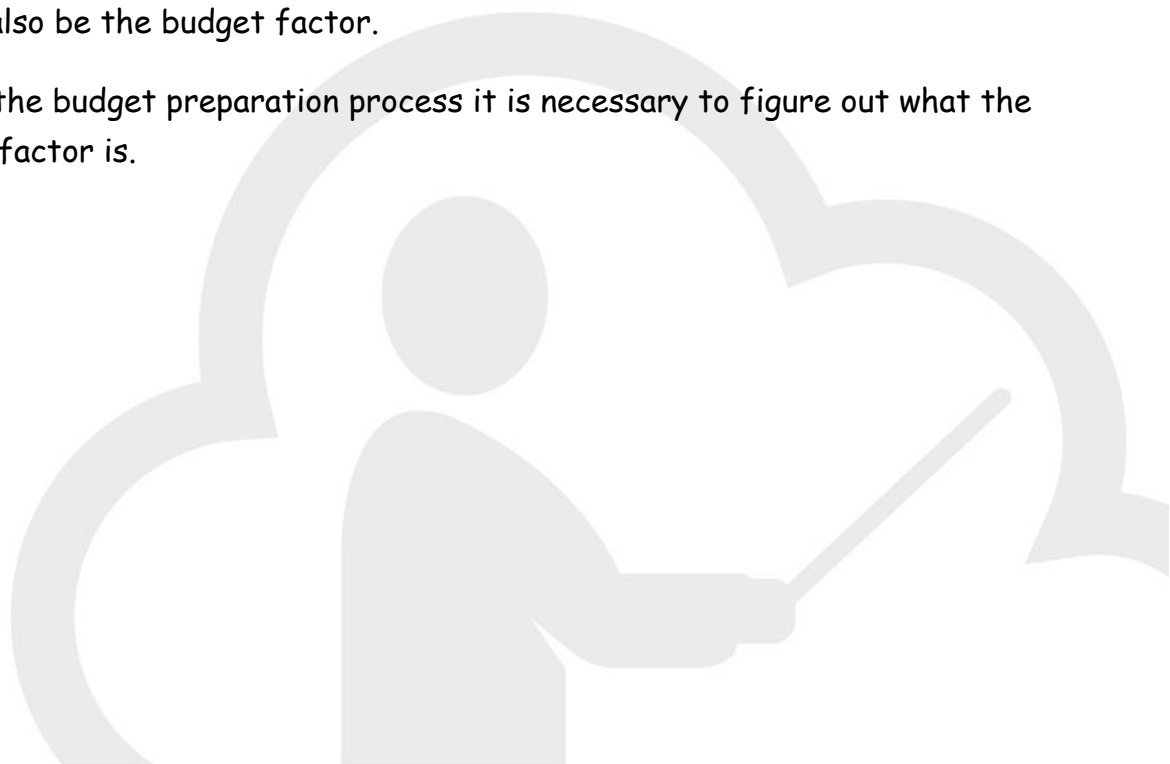
Budget Preparation

The principal budget factor

This is a factor that restricts activity or limits output and so prevents the company from expanding infinitely. It is also called the limiting budget factor. In most organisations sales demand is the principal budget factor.

The principal budget factor could be something else apart from sales demand. For examples, the availability of materials, labour, capacity of the plant or the availability of capital could also be the budget factor.

Before starting the budget preparation process it is necessary to figure out what the principal budget factor is.



Stages of the budget preparation process

This is a list of budgets required by a company engaged in manufacturing:

- Sales budget
- Production budget and finished goods stock budget
- Direct materials usage
- Direct purchases budget
- Direct labour budget
- Factory overhead budget
- Administration budget
- Selling and distribution budget
- Capital budget
- Cash budget
- Master budget

The Sales Budget

Normally, this is the first budget to be prepared because sales demand is usually the principal budget factor. A sales forecast for the budget period must be made before the sales budget can be prepared.

Sales budget = Quantity × Selling Price

A number of approaches can be used to arrive at a realistic sales forecast e.g.

- The last year's sales
- The opinion of the sales manager
- The opinion of sales representatives
- Statistical analysis
- Market research
- Competition

The sales budget will show the quantities and the sales value of each product the company intends to sell.



Ex.

Prepare a sales budget for Jonathan Ltd who manufactures two types of trailer for the holiday industry called Model 1 and Model 2. The expected sales of each trailer for the year ending 31/12/2011 are budgeted at.

	Model 1	Model 2
Budgeted sales	200 units	140 units
Expected selling price	€1500	€2000

Solution:

	Units	Selling Price	Sales Value
Model 1	200	€1500	€300,000
Model 2	140	€2000	€280,000
			€580,000

Production Budget & Finished Goods Stock Budget

The company must first find out what opening stock it expects to have on hand at the start of the budget period and what closing stock it plans to have on hand at the end of the period. This decides the planned increase or decrease in stock levels.

The production budget decides the quantities of finished goods that must be produced in order to meet expected sales demand plus the budgeted increase in stock levels or minus the budgeted decrease in stock levels.

Ex.

Prepare a production budget for Jonathan Ltd who expects to have the following opening and closing stock of Model 1 and Model 2 at the beginning and end of 2011.

	Model 1	Model 2
Expected opening stock	12	20
Expected closing stock	8	24

Solution:

	Model 1	Model 2
Budgeted sales (units)	200	140
Add budgeted closing stock	<u>8</u>	<u>24</u>
Total needed for production and stock	208	164
Less budgeted opening stock	<u>12</u>	<u>20</u>
Budgeted production (units)	196	144

Direct Materials Usage Budget

Having decided the production budget, a budget is now prepared for all the direct materials needed to meet this level of production. It is expressed in quantities only and is prepared by the production manager.

Ex.

Prepare a materials usage budget for Jonathan Ltd who expects to use the following direct material quantities per units in the manufacture of the trailers.

Materials Content	Material A	Material B
Model 1	20kg	25kg
Model 2	50kg	60kg

Solution:

Material Usage Budget		
	Material A	Material B
Model 1	(196 units x 20kg) 3,920kg	(196 x 25kg) 4,900kg
Model 2	(144 units x 50kg) 7,200kg	(144 x 60kg) 8,640kg
Materials usage budget (kg)	11,120kg	13,540kg



Direct Materials Purchases Budget

When we know the quantities or required materials, a materials purchases budget can be prepared. As in the case of the production budget, the planned increases or decreases in stocks of materials must be taken into consideration. This budget is expressed in quantities and in financial terms.

Ex.

Prepare a materials purchases budget for Jonathan Ltd who expects to have the following opening and closing stocks of direct materials at the beginning and end of 2011.

Materials Content	Material A	Material B
Expected opening stock	1,100kg	600kg
Expected closing stock	1,000kg	600kg
Expected price per kg	€6	€4

Solution:

Materials Purchases Budget			
	Material A	Material B	Total
Materials usage	11,120	13,540	
Add Budgeted closing stock	<u>1000</u>	<u>500</u>	
Total needed for production + stock	12,120	14,040	
Less Budgeted opening stock	<u>1,100</u>	<u>600</u>	
Materials purchases budget (in kg)	11,020	13,440	
Purchase price per kg	<u>€6</u>	<u>€4</u>	
Materials purchases budget (in €)	€66,120	€53,760	€119,880

Direct Labour Budget

This is taken from the production budget and establishes:

- The number of direct labour hours required to meet the planned production
- The planned direct labour wages costs

This budget is shown in labour hours and in wage costs. It is usually prepared by the production manager.

Ex.

Prepare a direct labour hour's budget for Jonathan Ltd who expects to spend the following labour hours in the manufacture of trailers.

Direct Labour Time	Dept. X	Dept. Y
Model 1	20	30
Model 2	25	40
Direct labour rate per hour	€5	€5

Solution:

Material Purchases Budget			
Production (in hours)	Dept. X	Dept. Y	Total
Model 1	3,920	5,880	9,800
Model 2	<u>3,600</u>	<u>5,760</u>	<u>9,360</u>
Budgeted direct labour (in hours)	7,520	11,640	19,160
Labour rate per hour	<u>€5</u>	<u>€5</u>	<u>€5</u>
Direct labour budget (in €)	€37,600	€58,200	€95,800

Factory Overhead Budget

This budget takes into account the indirect materials, indirect labour and other indirect expenses. For example, power and factory maintenance costs required to meet the level of production which has been decided upon. It is prepared by the production department manager and is shown in quantitative and financial terms.

Ex.

The figures in the following overhead budget are the overheads of Jonathan Ltd. This budget shows the total budgeted overhead cost and the calculation of overhead absorption rate.

Factory Overhead Budget		
Variable overheads	€	€
Machine maintenance	16,000	
Machine power	8,000	
Lubricants	<u>2,640</u>	<u>26,640</u>
Fixed Overheads		
Rent & Rates	4,000	
Supervisors salary	22,000	
Factory light & heat and insurance	7,000	
Depreciation of plant and machinery	<u>17,000</u>	<u>50,000</u>
Total budgeted factory overhead costs		76,640

Administration Budget

This budget deals with all the administration expenses involved in running the business, e.g. office expenses, accounting department, personnel department etc. It is expressed in financial terms and is the responsibility of the administration or office manager.

Ex.

Administration Budget	
Directors fees	€30,000
Office salaries	€44,000
Postage telephone and stationery	€4,500
Depreciation of office machinery	€3,000
Total Budgeted administration costs	€81,500

Selling and distribution budget

This budget deals with the costs that are likely to be incurred in selling and distributing the budgeted sales to customers. It is expressed in financial terms.

Ex.

Selling and Distribution Budget	
Salaries of sales department staff	€40,000
Commission	€10,000
Advertising	€5,000
Showroom expenses	€7,000
Total budgeted selling and distribution costs	€62,000

Capital Budget

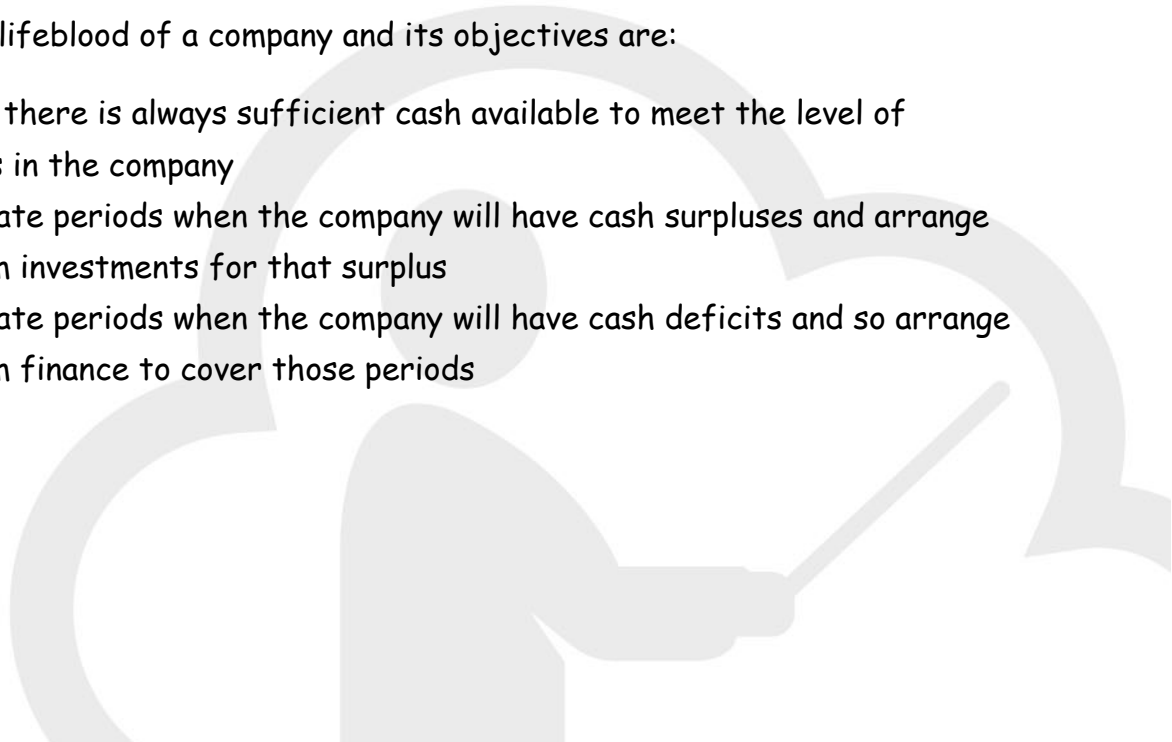
This budget deals with any planned capital expenditure e.g. purchase of fixed assets and planned capital receipts such as the sale of fixed assets, share issues and borrowing.

Cash Budget

This is a plan that summarises the expected inflows and outflows of cash, usually on a monthly basis. It highlights any surpluses or deficits and as such helps management to plan in advance for profitability and maybe investing short term surpluses or arranging finance to cover short term deficits.

Cash flow is the lifeblood of a company and its objectives are:

- To ensure there is always sufficient cash available to meet the level of operations in the company
- To anticipate periods when the company will have cash surpluses and arrange short term investments for that surplus
- To anticipate periods when the company will have cash deficits and so arrange short term finance to cover those periods



Master Budget

Once all of the budgets have been prepared, a master budget is then prepared to provide an overview of the planned operations of the company for the budget period.

It consists of:

- A budgeted profit and loss account
- A budgeted balance sheet

In the case of a manufacturing company, a master budget will comprise of:

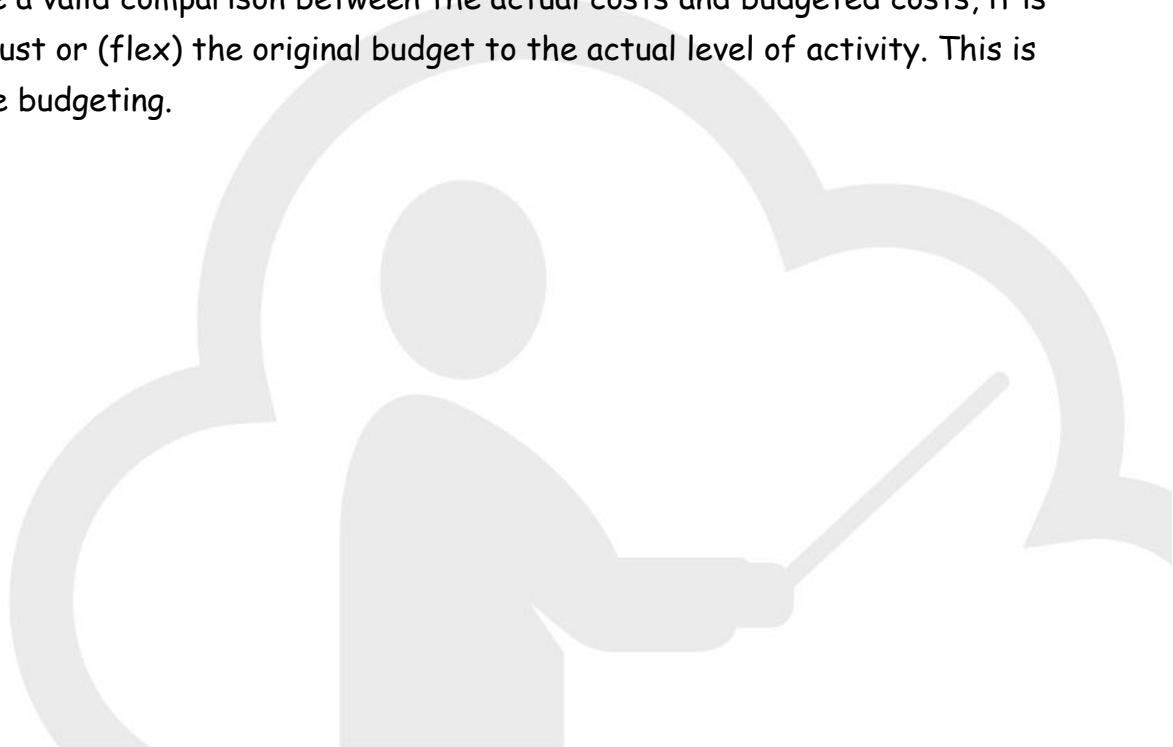
- A budgeted manufacturing account
- A budgeted trading account
- A budgeted profit and loss account
- A budgeted balance sheet

Flexible Budgeting (Higher Level)

One of the objectives of budgeting is to control costs. This is done by preparing a report which compares the actual costs for an accounting period with the planned or budgeted costs and shows the variances between them. This process is simple when the actual level of activity is the same as the budgeted level.

However, when the actual level of activity is different to the planned or budgeted level the comparison cannot be made so easily.

In order to make a valid comparison between the actual costs and budgeted costs, it is necessary to adjust or (flex) the original budget to the actual level of activity. This is known as flexible budgeting.



Let's take a look at a question

Q22.1

Gordon Ltd manufactures two products: Rough and Smooth. The expected sales for each unit for the year ended 31/12/2009 are budgeted at:

	Rough	Smooth
Sales are expected to be	4,000 units	5,000 units
Selling price	€20	€30

Stock of finished goods is expected to be:

Opening stock	50	60
Closing stock	40	70

Both products use the same raw materials and skilled labour but in different quantities per unit as follows:

	Material A	Material B
Rough	4 kg	3 kg
Smooth	5 kg	6 kg
Expected price	€8	€10

Stock of raw materials is expected to be:

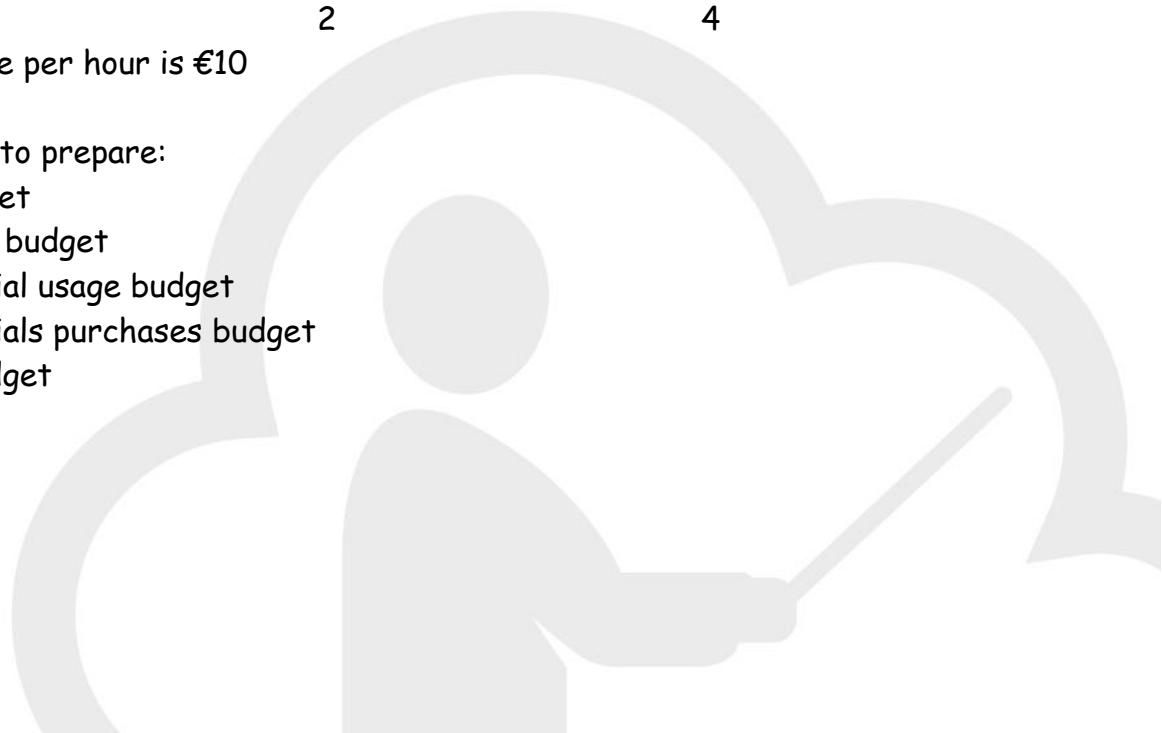
Opening stock	20	30
Closing stock	40	60

	Rough	Smooth
Labour hours	2	4

Direct labour rate per hour is €10

You are required to prepare:

- a) Sales budget
- b) Production budget
- c) Raw material usage budget
- d) Raw materials purchases budget
- e) Labour budget



Solution:

Sales Budget		
	Rough	Smooth
Expected sales	4,000 units	5,000 units
Expected selling price	€ 20.00	€ 30.00
Sales value	€ 80,000.00	€ 150,000.00

Production Budget		
	Rough	Smooth
Sales units	4,000	5,000
Add Closing stock (finished goods)	40	70
Less Opening stock (finished goods)	-50	-60
Budgeted production in units	3,990	5,010

Raw Materials Usage Budget		
	Material A	Material B
Rough (3,990 x 4kg)	15,960	11,970
Smooth (5,010 x 5kg)	20,050	30,060
Material usage in kg	41,010	42,030

Raw Materials Purchases Budget		
	Material A	Material B
Material usage	41,010	42,030
Add Closing stock	40	60
Less Opening stock	-20	-30
	41,030	42,060
Purchase price	€8	€10
Total Purchase Price	€328,240	€420,600

Labour Budget		
	Rough	Smooth
Production units	3,990	5,010
Labour rate	x €10	x €10
	39,990	50,100
	x 2	x 4
Total	€79,800	€200,400

9. Budgeting

Times Ltd manufactures two types of watch “Goldstar” and “Silverstar”. The sales of each type of watch and other relevant information for the year ended 31/12/2010 are budgeted at:

	Goldstar	Silverstar
Budgeted Sales	1,400 units	1,800 units
Expected selling price	€80	€50
Expected Stocks – <i>finished goods</i>	Goldstar	Silverstar
Opening stocks	180	220
Closing stocks	210	160
Material Content and Costs	Material A	Material B
Goldstar	2 grams	5 grams
Silverstar	3 grams	4 grams
Expected stocks – <i>raw materials</i>	Material A	Material B
Opening stocks	210 grams	300 grams
Closing stocks	240 grams	430 grams

Direct Labour time in hours

Goldstar	8 hours
Silverstar	5 hours

Direct labour rate per hour €9

You are required to prepare the following budgets:

- (a) Sales Budget in **units and in €**.
- (b) Production Budget.
- (c) Material Usage Budget.
- (d) Material Purchase Budget in **units**.
- (e) Labour (wages) Budget.

(80 marks)

(a)

Sales Budget

	Goldstar		Silverstar
Expected Sales in units	1,400	[4]	1,800 [4]
Selling Price	<u>€80</u>	[4]	<u>€50</u> [4]
Budgeted Sales Value	<u>€112,000</u>	[1]	<u>€90,000</u> [1]

(b)

Production Budget

	Goldstar		Silverstar
Required for sales	1,400	[2]	1,800 [2]
Add closing stock	<u>210</u>	[2]	<u>160</u> [2]
	1,610		1,960
Less opening stock	<u>180</u>	[2]	<u>220</u> [2]
Units produced	<u>1,430</u>	[2]	<u>1,740</u> [2]

(c)

Materials Usage Budget

	Material A		Material B
Goldstar (1,430 x 2g)	2,860 grams	[3]	7,150 (1,430 x 5 grams) [3]
Silverstar (1,740 x 3g)	<u>5,220 grams</u>	[3]	<u>6,960</u> (1,740 x 4 grams) [3]
	<u>8,080 grams</u>	[2]	<u>14,110 grams</u> [2]

(d)

Materials Purchases Budget

	Material A		Material B
Required for production	8,080 grams	[2]	14,110 grams [2]
Add Closing stock	<u>240</u>	[3]	<u>430</u> [3]
	8,320 grams		14,540 grams
Less Opening stock	<u>210 grams</u>	[3]	<u>300</u> [3]
	<u>8,110 grams</u>	[1]	<u>14,240 grams</u> [1]

(e)

Labour Budget

	Goldstar		Silverstar
Units	1,430	[1]	1,740 [1]
Labour hour per unit	<u>8 hrs</u>	[1]	<u>5 hrs</u> [1]
	11,440 hrs	[1]	8,700 hrs [1]
Wage rate per hour	<u>€9</u>	[1]	<u>€9</u> [1]
	<u>€102,960</u>		<u>€78,300</u>
Total		=	€181,260 [4]

Or

Goldstar (1,430 units x 8 hrs)	=	<u>11,440 hrs</u>	[3]
Silverstar (1,740 units x 5 hrs)	=	<u>8,700 hrs</u>	[3]
Budgeted direct labour hrs		20,140 hrs	
Labour rate per hour	=	<u>€9</u>	[2]
Total	=	<u>€181,260</u>	[4]



Homework

Higher Level

9. Budgeting

Crowley Ltd has recently completed its annual sales forecast to December 2015. It expects to sell two products – Micro at €240 and Excel at €300.

All stocks are to be reduced by 20% from their opening levels by the end of 2015 and are valued using the FIFO method.

	Micro	Excel
Sales are expected to be	11,000 units	6,500 units

Stocks of finished goods on 01/01/2015 are expected to be:

Micro	800 units at €130 each
Excel	550 units at €150 each

Both products use the same raw materials and skilled labour but in different quantities per unit as follows:

	Micro	Excel
Material X	6 kgs	4 kgs
Material Y	5 kgs	7 kgs
Skilled labour	7 hours	8 hours

Stocks of raw materials on 01/01/2015 are expected to be:

Material X	7000 kgs @ €1.80 per kg
Material Y	5000 kgs @ €3.60 per kg

The expected prices for raw materials during 2015 are:

Material X	€2 per kg
Material Y	€4 per kg

The skilled labour rate is expected to be €12 per hour.

Production overhead costs are expected to be:

Variable	€5 per skilled labour hour
Fixed	€180,400 per annum

Required:

- Prepare a Production Budget (in units).
- Prepare a Raw Materials Purchases Budget (in units and €).
- Prepare a Production Cost/Manufacturing Budget.
- Prepare a Budgeted Trading Account (*if the budgeted cost of a unit of Micro and Excel is €160 and €184 respectively*).
- Define what is meant by a Cash Budget and explain **two** advantages of a Cash Budget.
 - The Principal Budget factor is sales demand in most organisations. State **two** other factors that could also be considered to be the Principal Budget factor.

(80 marks)

(a)

Sales Budget	Micro	Excel	
Expected sales in units	11,000	6,500	
Expected selling price per unit	€240	€300	
Budgeted sales revenue	€2,640,000	€1,950,000	€4,590,000

Production budget	Micro	Excel
	Units	Units
Required by sales	[6] 11,000	6,500
Add Closing stock (80% of opening stock)	[6] <u>640</u>	<u>440</u>
	11,640	6,940
Less Opening stock	[4] <u>(800)</u>	<u>(550)</u>
Budgeted production in units	<u>10,840</u>	<u>6,390</u>

(b) **Raw Materials Purchases Budget**

	Material X	Material Y	
	Kgs	Kgs	
Required by production –			
Micro	(10,840 x 6) 65,040 [2]	54,200 [2] (10,840 x 5)	
Excel	(6,390 x 4) <u>25,560</u> [2]	<u>44,730</u> [2] (6,390 x 7)	
	90,600	98,930	
Add Closing stock (80% of opening stock)	<u>5,600</u> [2]	<u>4,000</u> [2]	
	96,200	102,930	
Less Opening stock	<u>(7,000)</u> [2]	<u>(5,000)</u> [2]	
Required purchases of raw materials in Kg's	89,200	97,930	
Purchase Price	<u>€2</u> [2]	<u>€4</u> [2]	
Purchase cost	€178,400	€391,720	€570,120

(c) **Production Cost/Manufacturing Budget**

Cost of raw materials consumed:		€	€
Opening stock of raw materials			
X	(7,000 x 1.80)	12,600	
Y	(5,000 x 3.60)	<u>18,000</u>	30,600 [4]
Purchases	(178,400 + 391,720)		<u>570,120</u> [2]
			600,720
Less Closing stock of raw materials			
X	(5,600 x 2)	11,200	
Y	(4,000 x 4)	<u>16,000</u>	<u>(27,200)</u> [4]
			573,520
Cost of Labour	(10,840 x 7 x 12)	910,560	
	(6,390 x 8 x 12)	<u>613,440</u>	1,524,000 [4]
Variable overheads	(10,840 x 7 x 5)	379,400	
	(6,390 x 8 x 5)	<u>255,600</u>	635,000 [4]
Fixed overheads			<u>180,400</u> [2]
Cost of manufacture			<u>2,912,920</u> [3]

		€	€
(d) Budgeted Trading Account			
Sales of finished goods	(2,640,000 + 1,950,000)		4,590,000 [2]
Opening stock of finished goods			
Micro	(800 x 130)	104,000	
Excel	(550 x 150)	<u>82,500</u>	186,500 [2]
Cost of Manufacture		<u>2,912,920</u>	<u>2,912,920</u> [2]
		3,099,420	
Less Closing stock of finished goods			
Micro	(640 x 160)	102,400	
Excel	(440 x 184)	<u>80,960</u>	<u>(183,360)</u> [4]
Gross Profit			<u>1,673,940</u> [3]

(e)

[6]

Cash Budget

A Cash Budget is a plan or forecast that summarises the expected inflows and outflows of cash during a period. This budget is prepared by the management accountant or the financial accountant.

A cash budget will anticipate periods when the organization will have cash surpluses and will enable it to arrange short term investments.

A cash budget will anticipate periods when the organization will have cash deficits and will enable it to make arrangements for a loan or overdraft.

A cash budget will help in making sure that there is always enough funds available to meet the day to day needs of the business.

[2]

Principal Budget Factor: Apart from sales demand the principal budget factor could also be:

Availability of materials

Availability of labour

Capacity of the plant

Availability of capital

