UNIT 9 PREPARATION AND REVIEW OF BUDGETS

Structure

9.0 OBJECTIVES

The main objectives of this unit are to make you familiar with :

- the preparation of different types of budgets;
- the preparation of Master budget; and
- review of different budgets.

9.1 INTRODUCTION

In the previous unit you have learnt about the basic concept of budgeting, establishment of a sound system of budgeting and classification of budgets. You have also learnt that budgeting is the principal instrument for projecting the future costs and revenues which is an essential aspect of management accounting and financial control. Budgeting helps in monitoring the present as well as past. Preparation of budgets involves a number of forecast or projections. It starts with sales forecasting and ends with the compilation of the master budget. In this unit you will study about the construction of functional budgets.

9.2 SALES BUDGET

The sales budget is usually the keystone in planning and control of operation of a business. Sales forecast serves as a base for the sales budget. The sales budget is prepared in quantitative terms of units expected to be sold and the value expected to be realised. The Sales Manager should be made directly responsible for the preparation and execution of sales budget. This is prepared according to the requirements of the business while preparing sales budget. The useful classification may be-products, territories, customers, salesmen, etc. More than one classification may be employed. However, at the time of preparing sales budget the following factors should be kept in mind:

(a) salesmen's estimates (b) orders in hand (c) Past behaviour (d) Management policies for future (e) seasonal fluctuations (f) availability of materials (g) plant capacity (h) availability of finance (i) potential market (j) level of competition (k) position of competitors, etc. Look at the following illustration how a sales budget is to be prepared.

Illustration 1

Shri Ramu manufactures two types of toys, Raja and Rani and sell them in Agra and Mumbai markets. The following information is made available for the current year 2003-2004:

Places/Markets	Type of Toys	Budgeted Sales 2002-2003	Actual Sales 2002-2003
Agra	Raja	400 at Rs. 9 each	500 at Rs. 9 each
	Rani	300 at Rs. 21 each	200 at Rs. 21 each
Mumbai	Raja	600 at Rs. 9 each	700 at Rs. 9 each
	Rani	500 at Rs. 21 each	400 at Rs. 21 each

Market studies reveal that toy Raja is popular as it is under priced. It is observed that if its price is increased by Rs.1 it will find a ready market. On the other hand, Rani is over-priced and market could absorb more sales if its selling price is reduced to Rs. 20. The management has agreed to give effect to the above price changes.

On the above basis, the following estimates have been prepared by Sales Manager:

Product	% increase in Sales	Over Current Budget
	Agra	Mumbai
Raja	+10%	+5%
Rani	+20%	+10%

With the help of an intensive advertisement campaign, the following additional sales above the estimated sale are possible:

Product	Agra	Mumbai
Raja	60 units	60 units
Rani	40 units	50 units

You are required to prepare a budget for sales incorporating the above estimates.

Solution

Sales Budget **Period 2003-2004**

Budget for the year		2002-2003			Actual Sales 2002-2003			Budget for the future		
Place	**Product**	**Units**	**Price Rs.**	**Value Rs.**	**Units**	**Price Rs.**	**Value Rs.**	**Units**	**Price Rs.**	**Value Rs.**
Agra	Raja	400	9	3600	500	9	4500	500	10	5000
	Rani	300	21	6300	200	21	4200	400	20	8000
	Total	**700**	**-**	**9900**	**700**	**-**	**8700**	**900**	**-**	**13000**
Mumbai	Raja	600	9	5400	700	9	6300	700	10	7000
	Rani	500	21	10500	400	21	8400	600	20	12000
	Total	**1100**		**15900**	**1100**	**-**	**14700**	**1300**	**-**	**19000**
Total	Raja	1000	9	9000	1200	9	10800	1200	10	12000
	Rani	800	21	16800	600	21	12600	1000	20	20000
	Total	**1800**	**-**	**25800**	**1800**	**-**	**73400**	**2200**	**-**	**32000**

Working Note:

1) Calculation of Budget Estimates

	Agra	Mumbai
Raja-Budgeted	400	600
Increase	40 (+10%)	30 (+5%)
	440	630
Advertisement effect	60	70
	500	700
Rani-Budgeted	300	500
Increase	60 (+20%)	50 (+10%)
	360	550
Advertisement effect	40	50
	400	600

Thus a preliminary sales budget is prepared product wise, territory-wise and also customer-wise and then a detailed budget is also prepared on the basis of salesman's estimates. Both the budgets are to be compared and necessary adjustments are to made to the final sales budget after taking into account the policy of the management. Then the sales budget will be submitted to the budget committee for approval and incorporation in the master budget.

9.3 PRODUCTION BUDGET

The Production Budget is a forecast of the production for the budget period. It provides an estimate of the total volume of production product-wise with the scheduling of operations by days, weeks and month and also a forecast of the closing finished product inventory. It is based on sales budget. The Factory Manager is the person generally made responsible for its preparation, administration and execution. This budget can also be prepared department-wise. This budget is prepared in quantity terms only. The main factors, which are useful in preparing production budgets are:

(a) Inventory Policies (b) Sales Requirements (c) Uniformity of Production (d) Plant Capacity (e) Availability of inputs (f) Duration of Production.

Production may be computed as follows :

Units to be produced = Budgeted Sales + Desired Closing Stock of finished goods – Opening Stock of finished goods.

Illustration 2

A manufacturing company submits the following figures for the first quarter of 2002:

Particulars	Product X	Product Y	Product Z
Sales (units) January	50,000	60,000	20,000
February	40,000	50,000	20,000
March	60,000	70,000	20,000
Selling price per unit (Rs.)	10	20	40
Targets for Ist quarter 2003: Increase in sales quantity	20%	10%	10%
Increase in sales price	Nil	10%	25%
Opening stock on Jan. 1, 2003 (Percentage of sales)	50%	50%	50%
Stock position on 31st March, 2003	40,000	50,000	10,000
Closing stock for January and February (Percentage of subsequent months sales)	50%	50%	50%

You are required to prepare the Sales and Production Budgets for the 1st quarter of 2003.

Solution

Sales Budget

	January, 03			February, 03			March, 03			Total	
	Units	Rate (Rs.)	Value (Rs.)	Units	Rate (Rs.)	Value (Rs.)	Units	Rate (Rs.)	Value (Rs.)	Units	Value (Rs.)
Product X	60,000	10	6,00,000	48,000	10	4,80,000	72,000	10	7,20,000	1,80,000	18,00,000
Product Y	66,000	22	14,52,000	55,000	22	12,10,000	77,000	22	16,94,000	1,98,000	43,56,000
Product Z	22,000	50	11,00,000	22,000	50	11,00,000	22,000	50	11,00,000	66,000	33,00,000
Total	1,48,000	—	31,52,000	1,25,000	—	27,90,000	1,71,000	—	35,14,000	4,44,000	94,56,000

Working Note :

1) Calculation of Budget estimates

		January	February	March
Product X :	Budgeted	50,000	40,000	60,000
	Increase (20%)	10,000	8,000	12,000
		60,000	48,000	72,000
Product Y :	Budgeted	60,000	50,000	70,000
	Increase (10%)	6,000	5,000	7,000
		66,000	55,000	77,000
Product Z :	Budgeted	20,000	20,000	20,000
	Increase (10%)	2,000	2,000	2,000
		22,000	22,000	22,000

Production Budget for the 1st Quarter 2003 **(Units)**

Particulars	**January**	**February**	**March**	**Total**
Product X : Sales Budget	60,000	48,000	72,000	1,80,000
Add : Closing Stock (50% of subsequent month sales)	24,000	36,000	40,000	40,000
	84,000	84,000	1,12,000	2,20,000
Less : Opening Stock (50% of sales)	30,000	24,000	36,000	30,000
PRODUCTION BUDGET	54,000	60,000	76,000	1,90,000
Product Y : Sales Budget	66,000	55,000	77,000	1,98,000
Add : Closing Stock (50% of subsequent month sales)	27,500	38,500	50,000	50,000
	93,500	93,500	1,27,000	2,48,000
Less : Opening Stock (50% of sales)	33,000	27,500	38,500	33,000
PRODUCTION BUDGET	60,500	66,000	88,500	2,15,000
Product Z : Sales Budget	22,000	22,000	22,000	66,000
Add : Closing Stock (50% of subsequent month sales)	11,000	11,000	10,000	10,000
	33,000	33,000	33,000	76,000
Less : Opening Stock (50% of sales)	11,000	11,000	10,000	11,000
PRODUCTION BUDGET	22,000	22,000	23,000	65,000

Note : Closing stock as on 31st March, 2003 is given in the problem. Opening and closing stock for January and February months have been calculated as per the percentages given in the problem. Students should be noted that the previous months closing stock will become opening stock of subsequent month.

9.4 PRODUCTION COST BUDGET

This budget is a forecast of the cost of production which has been planned in the production budget. The production budget is prepared in terms of quantity to be produced. The amount is shown in this budget. The total cost of production is arrived at by adding the cost of materials, labour and manufacturing overheads. The quantity of material, the time taken by labour and the estimated costs of material, labour and expenses- all can be shown as part of production cost budget also.

Illustration 3

The following information is abstracted from the books of a ABC Co. Ltd., for the six months of 2005 in respect of product X :

The following units are to be sold in different months of the year 2005:

January	2,200
February	2,200
March	3,400
April	3,800
May	5,000
June	4,600
July	4,000

There will be work in progress at the end of the month. Finished units are equal to half the sales of the next month's stock at the end of every month (including December, 2004). Budgeted production and production cost for the half-year ending 30th June, 2005 are as follows :

Production (units)	40,000
Direct material per unit	Rs. 5
Direct wages per unit	Rs. 2

Factory Overheads apportioned to production Rs.1,60,000

You are required to prepared Product Budget and Production Cost Budget for the six months of year 2005.

Solution

Production Budget (in Units)

	January	February	March	April	May	June	Total
Estimated Sales	2200	2200	3400	3800	5000	4600	
Add : Closing Stock	1100	1700	1900	2500	2300	2000	
	3300	3900	5300	6300	7300	6600	
Less : Opening Stock	1100	1100	1700	1900	2500	2300	
Production	2200	2800	3600	4400	4800	4300	22,100

Production Cost Budget

(Production : 22, 100 units)

	Rs.
Direct materials @ Rs. 5 for 22,100 units	1,10,500
Direct wages @ Rs. 2 for 22100 units	44,200
Factory Overheads @ Rs. 4 for 22100 units (Rs. 1,60,000/40,000 units)	88,400
Total Production Cost	2,43,100

9.5 MATERIALS BUDGET

Materials are either direct or indirect. The Material budget generally deals only with the direct materials. Indirect materials are generally included in overhead budget. The material requirements are estimated on the basis of quantity of each class of products to be produced by multiplying the exact material requirement for each class of product by the number of units of that class. Material budget can be prepared on the basis of standards or, historical data regarding percentage of raw materials to total cost, adjusted for current price and normal wastage of material.

The factors to be considered while preparing the Material Budget are : the quantity of material required for the production budget, tentative dates by which required material must be available, the availability of storage facilities as well as credit facilities, price trends in the market, nature of the materials required etc. Only direct materials are to be taken into account and indirect materials are not taken into account as they are considered under overheads budget. The material budget helps the management for proper planning of purchases. The object of the budget is to ensure the availability of adequate quantities of materials as and when required. It will be included in the Master Budget after the approval of Budget Committee.

Illustration 4

The following information relates to a manufacturing company :

Targeted sales of product X 1,00,000 units. Each unit of product X requires 3 units of material A and 4 units of material B.

Estimated opening balances at the commencement of the next year :

Finished product : 20,000 units

Material A : 24,000 units

Material B : 30,000 units

The desirable closing balances at the end of the next year are :

Finished Products : 28,000 units

Material A : 26,000 units

Material B : 32,000 units

From the above information prepare a Material Budget.

Solution

Firstly, we have to find out the number of units to be produced. We know that,

Opening Stock + Production = Sales + Closing Stock

Units to be produced = Sales + Closing Stock – Opening Stock

$$= 1,00,000 + 28,000 - 20,000$$

$$= 1,08,000 \text{ units}$$

Material required :

Material A = $1,08,000 \times 3 = 3,24,000$ units

Material B = $1,08,000 \times 4 = 4,32,000$ units

Material Purchase Budget (Units)

Particulars	Finished Product	Material required A	Material required B
Budgeted Production	1,08,000	3,24,000	4,32,000
Add : Opening Stock	(+) 20,000	(–) 24,000	(–) 30,000
	1,28,000	3,00,000	4,02,000
Less : Closing Stock	(–) 28,000	(+) 26,000	(+) 32,000
Estimated product for sales	1,00,000		
Estimated Material required :		3, 26, 000	4, 34, 000

9.6 PURCHASE BUDGET

Purchase Budget gives the details of material purchases to be made in the budget period. It correlates with sales forecast and production planning. It deals with purchases that are required for planned production. Purchases would include both direct and indirect materials and goods. While placing the purchase orders material manager has to see the orders on hand and unfulfilled orders at the beginning of the budget period and adjust the purchases accordingly. Purchase budget enables the budget officer to provide funds in the cash budget according to delivery schedules, terms of payment and credit period. While preparing purchase budget the factors like the opening and closing stock to be maintained, maximum and minimum stock quantities to be maintained, economic order quantity level, the resources available, the policy of management etc., should also be taken into account.

Budgeted Purchase Quantity = Budgeted Consumption Quantity + Required Closing Stock – Opening Stock.

9.7 DIRECT LABOUR BUDGET

The direct labour budget tells about the estimates of direct labour requirements essential for carrying out the budgeted output. The quantity of labour, e.g. skilled, unskilled, semi-skilled etc are estimated first. The time taken by them can be measured in terms of man hours. Thereafter, the total cost of labour is estimated by multiplying the rates of pay with the labour hours. The purpose of this budget is to ensure optimum utilization of labour force.

9.8 OVERHEADS BUDGET

The overheads budget should be prepared in three parts as follows :

1) Manufacturing Overhead Budget
2) Administration Overhead Budget, and
3) Selling and Distribution Overhead Budget.

Manufacturing Overhead Budget

The budget is an estimate of the manufacturing overhead costs to be incurred in the budget period to achieve the targeted production. Manufacturing overheads include indirect material, indirect labour, and indirect expenses related to the factory. The cost of each and every item of these three components of manufacturing overhead is separately estimated as per the requirements of production.

Administration Overhead Budget

Administration overhead includes the costs of framing policies, directing the organisation and controlling the business operations. Most of the administration expenses are normally unconnected with the volume of activity, therefore, experience and anticipated changes in conditions are the guides for the preparation of this budget.

Selling and Distribution Overhead Budget

The budget includes all expenses relating to selling, advertising, delivery of goods to customers, etc. The overheads may be determined on the basis of sales targets being allocated to different territories or salesman etc. Those expenses which generally vary with the sales quantity are estimated on sales basis, others which are of a fixed nature, are estimated on the basis of past experience and anticipated changes. The responsibility for the preparation of this budget lies with the executives of the sales departments. Let us prepare a sales overheads budget from the following illustration.

Illustration 5

Prepare a Sales Overheads Budget for the quarter ending 31st March, 2005 from the estimates given below:

	Rs.
Advertisement	12,500
Salaries of sales department	25,000
Expenses of sales department	7,500
Counter salesmen salaries and allowances	30,000

Commission to counter salesmen is payable at 1% of sales executed by them.

Travelling salesman are entitled to a commission at 10% on sales effected through them and a further 5% towards expenses.

(Rs.)

Sales Territories	Sales at Counters	Sales by Travelling salesmen	Total estimated sales
A	4,00,000	50,000	4,50,000
B	6,00,000	75,000	6,75,000
C	7,00,000	1,00,000	8,00,000

Solution

Sales Overheads Budget
For the period ended March 31, 2005

		Estimated Sales in Territories		
		A	**B**	**C**
		Rs.	Rs.	Rs.
		4,50,000	6,75,000	8,00,000
Fixed Overheads:				
Advertisement		12,500	12,500	12,500
Salaries of Sales Department		25,000	25,000	25,000
Expenses of Sales Department		7,500	7,500	7,500
Counter Salesmen's Salaries and allowances		30,000	30,000	30,000
	(a)	75,000	75,000	75,000
Variable Overheads:				
Counter salesmen commission @ 1% on sales		4,000	6,000	7,000
Traveling salesmen commission @ 10%		5,000	7,500	10,000
Expenses @ 5% on Sales by Travelling Salesmen		2,500	3,750	5,000
	(b)	11,500	17,250	22,000
Total Sales Overheads (a) + (b)		86,500	92,250	97,000

9.9 CAPITAL EXPENDITURE BUDGET

The budget is the plan of the proposed outlay on fixed assets such as land, buildings, plant and machinery. The budget is prepared after taking into account the available productive capacities, probable reallocation of existing assets and possible improvement in production techniques. etc.

Capital expenditure budget serves the following purposes :

i) It facilitates long-term planning and policy-making.

ii) It facilitates of replacing the old machinery by latest machinery or to change the methods of production for reducing costs.

iii) It helps in the estimates of capital requirement after taking into account the disposable value of old assets.

iv) It helps in the preparation of cash budget and also assessing the capital cost of improving working conditions or adopting safety measures, etc.

9.10 CASH BUDGET

A Cash Budget is a summary statement of the firms' expected cash inflows and outflows over a projected time period. In other words, cash budget involves a projection of future cash receipts and cash disbursements over various time intervals.

While preparing cash budget seasonal factors must be taken into account and in practice cash budget is prepared on a monthly basis. The availability of other budgets is tested in terms of cash availability. Cash budget is also called as cash flow statement which indicates cash inflow and cash outflows. It is generally prepared for a maximum period of one year.

A cash budget helps the management in (i) determining the future cash needs of the firm, (ii) planning for financing of the needs; (iii) exercising control over cash and liquidity of the firm.

The overall objective of a cash budget is to enable the firm to meet all its commitments in time and at the same time prevent accumulations of unnecessary large balance with it.

Methods of Preparing Cash Budgets

There are basically three methods for preparing cash budgets.

1) Receipts and Payments Method

2) Adjusted Profit and Loss Account Method

3) Balance Sheet Method

Let us study about these methods in brief.

1) **Receipts and Payments Method**

Under this method, all receipts are added and out of the total, the sum of all payments is deducted to arrive at the balance in hand. The closing balance in hand say, for a particular month is the opening balance of the next month and is added to the total of receipts so as to know the total availability of cash during the month. The receipts and payments during the budget period are found out from various functional budgets prepared. The credit allowed to debtors, the credit allowed to us by suppliers, the delay in payment of wages and other expenses etc. are the factors, which are taken into account to determine the timing of receipts and payments. Advance payments and receipts are to be included but the payment in abeyance and income accrued on outstanding are excluded from cash budget. Revenue as well as capital receipts and payments are recorded in cash budget.

Illustration 6

A company newly starting manufacturing operations on ^{1st} January 2003 has made adequate arrangement for funds required for fixed assets. It wants you to prepare an estimate of funds required as working capital. It is to be remembered that:

a) In the first month there will be no sale, in the subsequent month sale will be 25% cash and 75% credit. Customer will be allowed one month credit.

b) Payments for purchase of raw materials will be made on one month credit basis.

c) Wages will be paid fortnightly on the 22^{nd} and 7^{th} of each month.

d) Other expenses will be paid one month in arrear except that 5% of selling expenses are to be paid immediately on sale being effected.

The estimated sales and expenses for the first six months, spread evenly over the period subject to (a) above are as under:

	Rs.		Rs.
Sales	3,60,000	Administrative Expenses	54,000
Material Consumed	1,50,000	Selling Expenses	42,000
Wages	60,000	Depreciation on fixed assets	50,000
Manufacturing Exp.	48,000		

The article produced is subject to excise duty equal to 10% of the selling price. The duty is payable on March 31, June 30, September 30, and December 31 for sales upto February 28, May 31, August 31 and November 30 respectively.

Prepare Cash Budget for each of the six months indicating the requirement of working capital.

Solution

Cash Budget

for the six months ended on June 30, 2003

Particulars	January Rs.	February Rs.	March Rs.	April Rs.	May Rs.	June Rs.
Receipts:						
Opening Balance	-	(–) 7,500	(–) 45,000	(–) 39,200	(–) 26,200	(–) 13,200
Cash Sales	-	18,000	18,000	18,000	18,000	18,000
Receipts from customers	-	-	54,000	54,000	54,000	54,000
Cash Available (A)	-	**10,500**	**27,000**	**32,800**	**45,800**	**58,800**
Payments:						
Wages	7,500	10,000	10,000	10,000	10,000	10,000
Materials	-	25,000	25,000	25,000	25,000	25,000
Manufacturing Exp.	-	8,000	8,000	8,000	8,000	8,000
Administrative Exp.	-	9,000	9,000	9,000	9,000	9,000
Selling Exp.	-	3,500	7,000	7,000	7,000	7,000
Excise Duty	-	-	7,200	-	-	21,600
Total Payments (B)	**7,500**	**55,500**	**66,200**	**59,000**	**59,000**	**80,600**
Closing Balance (A–B)	**(–) 7,500**	**(–) 45,000**	**(–) 39,200**	**(–) 26,200**	**(–) 13,200**	**(–) 21,800**

Note : The Company needs overdraft facility to the extend indicated above for every month.

2) **Adjusted Profit and Loss Account Method**

The budgeting done by Adjusted Profit and Loss account method is known as cash flow statement and is more suitable for long-term forecasting. Under this method profit is taken as equivalent to cash and necessary adjustments are done in respect of non-cash transactions. The net estimated profit is taken as the base and non-cash items like depreciation, outstanding expenses, provisions etc. already deducted to arrive at the net profit are added back. The capital receipts, reduction in debtors, stocks, increase in liabilities, issue of share capital and debentures are other items which are added to compute the total cash receipts. The payments of dividends, prepayments, capital payments, increase in debtors, increase in stock and decrease in liabilities are deducted out of the total cash receipts. The profit adjusted this way denotes the estimated cash available. The cash available during budget period is calculated in the following form:

Cash Budget
For the period ending 31st March……………

			Rs.
Opening balance of Cash			x x x
Add :			
Net profit for the year		x x x	
Funds from operations :			
Depreciation	x x x		
Provision and write off	x x x		
Loss on sale of assets	x x x		
	x x x		
Less : Profit on sale of assets	x x x	x x x	
“ Decrease in debtors		x x x	
“ Decrease in Stocks		x x x	
“ Decrease in other assets		x x x	
“ Decrease in prepaid exps.		x x x	
“ Increase in Capital		x x x	
“ Increase in liabilities		x x x	
“ Increase in debentures		x x x	x x x
			x x x
Less :			
Dividends		x x x	
Capital payments		x x x	
Repayment of loans		x x x	
Increase in Debtors		x x x	
Increase in Stock		x x x	
Decrease in liabilities		x x x	x x x
Closing balance of Cash			x x x

Illustration 7

The following data are available to you. You are required to prepare a cash budget according to Adjusted Profit and Loss method.

Balance Sheet as on 31st December, 2005

Liabilities	**Amount Rs.**	**Assets**	**Amount Rs.**
Share Capital	1,00,000	Premises	50,000
General Reserve	20,000	Machinery	25,000
Profit and Loss A/c	10,000	Debtors	40,000
Creditors	50,000	Closing Stock	20,000
Bills Payable	10,000	Bills Receivable	5,000
Outstanding Rent	2,000	Prepaid Commission	1,000
		Bank	51,000
	1,92,000		1,92,000

Projected Trading And Profit and Loss Account

for the year ending 31st December, 2005

		Rs.		Rs.
To Opening Stock		20,000	By Sales	2,00,000
To Purchases		1,50,000	By Closing Stock	15,000
To Octori		2,000		
To Gross Profit c/d		43,000		
		2,15,000		**2,15,000**
To Interest		3,000	By Gross Profit b/d	43,000
To Salaries		6,000	By Sundry Receipts	5,000
To Depreciation (10% on Premises and Machinery)		7,500		
To Rent	6,000			
Less: Outstanding (Previous Year)	2,000			
	4,000			
Add-Outstanding (Current Year)	1,000	5,000		
To Commission	3,000			
Add-Prepaid (Previous Year)	1,000	4,000		
To Office Expenses		2,000		
To Advertisement Expenses		1,000		
To Net Profit c/d		19,500		
		48,000		**48,000**
To Dividends		8,000	By Balance of Profit (from last year)	10,000
To Addition to Reserves		4,000	By Net Profit b/d	19,500
To Balance c/d		17,500		
		29,500		**29,500**

Closing Balance of certain items:

Share Capital Rs. 1,20,000, 10% Debentures Rs. 30,000, Creditors Rs. 40,000, Debtors Rs. 60,000, Bills Payable Rs. 12,000, Bill Receivable Rs. 4,000, Furniture Rs. 15,000 and Plant Rs. 50,000 (both these assets are purchased at the end of the year).

Solution

Cash Budget

For the period ending 31st December, 2005

		Rs.	Rs.
Opening Balance as on 1st January, 2005			51,000
Add:	Net Profit for the year	19,500	
	Depreciation	7,500	
	Decrease in Bills Receivable	1,000	
	Increase in Bills Payable	2,000	
	Issue of Share Capital	20,000	
	Issue of Debentures	30,000	
	Decrease in Prepaid commission	1,000	
	Decrease of Stock	5,000	86,000
			1,37,000

Less:	Purchase of Plant	50,000	
	Purchase of Furniture	15,000	
	Increase of Debtors	20,000	
	Decrease of Creditors	10,000	
	Decrease in Outstanding Rent	1,000	
	Dividends Paid	8,000	1,04,000
	Closing Balance as on 31st December, 2005		Rs. 33,000

3) **Balance Sheet Method**

Under this method, at the end of budget period a projected balance sheet is drawn up setting out the various assets and liabilities, except cash and bank balances. The balancing figure would be the estimated closing cash/bank balance. Thus, under this method, closing balances other than cash/bank will have to be found out first to be put in the budgeted balance sheet. This can be done by adjusting the anticipated transaction of the year in the opening balances. If the liabilities are more than assets, this reveals a balance of cash/bank and if assets exceed liabilities, it reveals a bank overdraft. Thus, under Adjusted Profit and Loss method, the amount of cash is computed by preparing a Cash Flow Statement and the same amount is computed as a balancing figure under Balance Sheet method.

Illustration 8

Prepare the Cash Budget using Balance Sheet method on the basis of figures given in illustration 7.

Solution

Budgeted Balance Sheet

as on 31st December, 2005

Liabilities	Amount Rs.	Assets	Rs.	Amount Rs.
Share Capital	1,20,000	Premises	50,000	
10% Debentures	30,000	Less : Depreciation	5,000	45,000
General Reserve (Rs. 20,000 +Rs. 4000)	24,000	Machinery	25,000	
		Less: Depreciation	2,500	22,500
Profit and Loss A/c	17,500			
Creditors	40,000	Furniture		15,000
Bills payable	12,000	Debtors		60,000
Outstanding Rent	1,000	Bills Receivable		4,000
		Plant		50,000
		Closing Stock		15,000
		Bank (Balancing Figures)		33,000
	2,44,500			2,44,500

9.11 MASTER BUDGET

Master Budget is a combination of all other budgets prepared for a specific period. It shows the overall budget plan. All the budgets are coordinated into one harmonious unit.

According to Rowland and William H. Harr, "Master Budget is a summary of the budget schedules in capsule form made for the purpose of presenting in one report the highlights of the budget forecast." Thus, Master Budget sets out the plan of operations for all departments in considerable detail for the budget period. The budget may take the form of a Profit and Loss Account and a Balance Sheet as at the end of the budget period.

The budget generally contains details regarding sales (net), production costs, cash position, and key account balances like debtors, fixed assets, bills payable, etc. It also shows the gross and the net profits and the important accounting ratios. It is prepared by the Budget Officer and it requires the approval of the Budget Committee before it is put into operation. If approved, it is submitted to the Board of Directors for final approval. The Board may make certain alterations if necessary before it is finally approved.

Illustration 9

A Glass Manufacturing Company requires you to calculate and present the budget for the next year from the following information.

Sales:

Toughened glass	Rs. 3,00,000
Bent toughened glass	Rs. 5,00,000
Direct Material Cost	60% of Sales
Direct Wages	20 Workers @ Rs. 150 per month
Stores and spares	2½ % on Sales
Depreciation on Machinery	Rs. 12,600
Light and Power	Rs. 5,000

Factory Overhead:

Indirect Labour:

Works Manager Rs. 500 per month

Foreman Rs. 400 per month

Repairs and maintenance 10% on direct wages

Administration, selling and distribution expenses Rs. 14,000 per year.

Solution

Master Budget

for the period ending on ....

	Rs.	Rs.	Rs.
Sales (as per Sales Budget)			
Toughened Glass....... units @ Rs	3,00,000		
Bent toughened glass .... units @ Rs	5,00,000		8,00,000
Less- Cost of Production (as per Cost of Production Budget) :			
Direct Materials (.... units @ Rs......)	4,80,000		
Direct Wages	36,000		
Prime Cost		5,16,000	
Factory Overhead:			
Variable: Stores and Spares (2½% of Sales)	20,000		
Light and Power	5,000		
Repairs and Maintenance	8,000	33,000	
Fixed : Works Manager's Salary	6,000		
Foreman's Salary	4,800		
Depreciation	12,600		
Sundries	3,600	27,000	
Works Cost			5,76,000
Gross Profit			2,24,000
Less : Administration, Selling and Distribution Overheads			14,000
Net Profit			2,10,000

9.12 REVISION OF BUDGETS

Once a budget is fixed it should not be revised too frequently, as it loses its importance. On the other hand, under changing conditions, a fixed or static budget will lead to serious inaccuracies and will fail to serve as a control document and a measuring tool. Normally, budgets are prepared well before the period of commencement and naturally all the factors can not be foreseen with minute accuracies. It is a recognised fact that business is dynamic and factors are ever changing. Budget, in order to play its proper role changes must be incorporated if they are significant. The revision of budgets may be necessitated on account of the following reasons:

i) Budgeting errors, detected at a later stage.

ii) Change in external factors like material price-spiral, inflation in the prices of fixed assets, increased wage rates, change in government policy, etc.

iii) Additional expenditure to meet contingencies of an unforeseen nature, *e.g.* sudden loss on account of fire, strikes, lockouts, flood, tycoons, etc. If such contingencies are of a temporary nature, the budgets are again reshaped in their original form.

Illustration 10

A Company produces two products A and B and budgets at 70% level of activity for the year 2003. It gives the following information :

Products	A (Rs.)	B (Rs.)
Raw material cost per unit	15	7
Direct wages per unit	8	6
Variable overhead per unit	4	3
Fixed overhead per unit	12	9
Selling price per unit	38	27
Production and sales (Units)	12000	18000

The managing director proposed to decrease sales to 8000 units and 12000 units of Product A and B respectively and increasing the selling price to Rs. 40 in the case of Product A and Rs. 30 in the case of Product B.

You are required to present the overall profitability under the original budget and revised budget after taking the above proposal into consideration.

Solution

Budget
For the year 2004

Particulars	Revised Budget			Original Budget		
	A	B	Total	A	B	Total
Sales Units	**8,000**	**12,000**		**12000**	**18000**	
Sales (Value in Rs.)(A)	3,20,000	3,60,000	6,80,000	456,000	4,86,000	9,42,000
Costs :	**Rs.**	**Rs.**	**Rs.**	**Rs**	**Rs**	**Rs**
Raw Material	1,20,000	84,000	2,04,000	1,80,000	1,26,000	3,06,000
Labour	64,000	72,000	1,36,000	96,000	1,08,000	2,04,000
Variable O.H	32,000	36,000	68,000	48,000	54,000	99,000
Fixed O. H.	96,000	1,08,000	2,04,000	1,44,000	1,62,000	3,06,000
Total Cost (B)	**3,12,000**	**3,00,000**	**6,12,000**	**4,68,000**	**4,50,000**	**9,18,000**
Profit (A-B)	8,000	60,000	68,000	(–) 12,000	36,000	24,000

The managing director's proposal is to be implemented as the profit is increasing from Rs. 24,000 to Rs. 68,000 keeping in view other factors also.

9.13 BUDGET REPORT

Proper reporting is an essential element in budgetary control. The management must be regularly informed about the results of various functions so that follow up actions can be taken up without loss of time. The periodicity of reports depends on the nature of operations involved. The budgetary control reports are prepared on the basis of the budget reports. The comparison of budgeted and actual figures is made and deviations taken out- all the relevant figures are presented in the control reports. On the basis of the principle of management by exception, remedial and corrective action is taken. The report may indicate the necessity of revision of the budget also.

The budget report should be prompt and factual and should have the requisite degree of accuracy. The report should be prepared in such a manner that it reveals the responsibility of a department or an executive and give full reasons for the variances so that proper corrective action can be taken.

Check Your Progress

1) State the factors that should be kept in mind while preparing Sales Budget.

a) ....   d) ....

b) ....   e) ....

c) ....   f) ....

2) What are the components of functional budgets ?

....

....

....

....

3) Specify the objectives of preparing capital expenditure budget.

....

....

....

....

4) Why does revision of budget necessary ?

....

....

....

....

5) Fill in the blanks :

a) .... is responsible for the preparation and execution of sales budget.

b) Production budget is based on .... budget.

c) Purchase budget must correlate .... budget and .... budget.

d) .... budget is the combination of all other budgets.

e) The preparation of cash budget by the method of adjusted profit and loss account is also known as.............................. .

f) Master budget is the summary of all components of ....

6) State whether each of the following statement is true or false.

a) The cost of materials, labor and manufacturing overheads constitutes total cost of sales [ ]

b) The purpose of Direct labour budget is to ensure optimum utilisation of labour force. [ ]

c) Direct materials are generally included in overhead budget. [ ]

d) Once a budget is fixed there is no need to incorporate the changes in the budget however significant they are. [ ]

e) Cash budget indicates the amount of loan required as well as the time when it is needed. [ ]

f) A Master Budget is the master plan drawn up by the organisation for the budget period. [ ]

9.14 LET US SUM UP

Budgeting is the main instrument for projecting the future costs and revenues and for financial control of the organisation. Preparation of budgets involves a number of forecasts or projections. It starts with sales forecasting and ends with the compilation of the master budget. The sales budget is the keystone in planning and control of operations of a business. Sales forecast serves as a base for the sales budget. The Sales Manager is responsible for the preparation and execution of sales budget. In addition to sales budget, other functional budgets are also prepared. The other functional budgets are : i) Production Budget, ii) Cost of Production Budget, iii) Material Budget, iv) Purchase Budget, v) Direct Labour Budget, vi) Manufacturing Overhead Budget, vii) Administration Overhead Budget, viii) Selling and Distribution Overhead Budget, and ix) Capital Expenditure Budget.

A cash budget is a summary statement of the firms expected cash inflows and outflows over a projected time period. It is generally prepared for a maximum period of one year. There are three methods of preparing cash budgets. They are : i) Receipts and Payment Method, ii) Adjusted Profit and Loss Account Method, and iii) Balance Sheet Method.

A master budget is a combination of all other budgets prepared for a specific period. It shows the overall budget plan. The budget generally contains details regarding sales, production costs, cash position and the key account balances. It also shows profit and important accounting ratios. Revision of budgets is necessary to incorporate the changing conditions for effective control. Revision of budget may be necessitated due to budgeting errors, change in external factors and additional expenditure to meet unforeseen contingencies. Proper reporting is an essential element in budgetory control. The management must be regularly informed about the results of various functions so that remedial and corrective action may be taken well in time. The report may also indicate the necessity of revision of budget also.

9.15 KEY WORDS

Cash Budget : A summary statement of future cash receipts and payments over a projected time period.

Production Budget : A forecast of production expressed quantitatively for the budget period.

Sales Budget : A budget expressed in quantitative terms of units expected to be sold and the value expected to be realised for the budget period.

9.16 ANSWERS TO CHECK YOUR PROGRESS

5) a) Sales Manager b) Sales c) Sales, production d) Master Budget

d) Cash flow statement f) Functional budget

6) a) False b) True c) False d) False e) True f) True

9.17 TERMINAL QUESTIONS

1) What is a Sales Budget ? How is it prepared ?

2) Write short notes on the following :

   i) Sales Budget

   ii) Material Budget

   iii) Production Cost Budget

   iv) Overhead Budget

3) What is a Cash Budget ? How is it prepared ?

4) What is a Master Budget ? What are its Components ?

5) From the following particulars, prepare a production budget of a manufacturing company for the year ended 31st March, 2003.

Product	Sales Budget (Units)	Estimated Stock (Units) 1-4-2002	31-3-2003
A	75,000	7,000	7,500
B	50,000	2,500	7,250
C	35,000	4,000	4,000

(Ans. A : 75,500 Units, B : 54, 750 Units, C : 35,000 Units)

6) Prepare a material procurement budget (in units) from the following information :

Estimated sales of a product 40,000 units. Each unit of the product requires 3 units of Material A and 4 units of Material B. Estimated opening balance at the beginning of the next year:

	Units
Finished Products	5,000
Material A	19,000
Material B	31,000

The desired level of closing balances at the end of the next year :

Finished Products	7,000

Material A	23,000
Material B	35,000

(Ans. Production 42,000 units, Material required : Material A : 1,30,000 units, Material B : 1,72,000 units)

7) The budgeted expenses for production of 10,000 units in a manufacturing company are given below. From the information prepare a budget for the production of (a) 8000 units and (b) 6000 units. Assume that the administration expenses are fixed for all levels of production:

	Rs. Per unit
Materials	70
Labour	25
Variable Overheads	20
Fixed Overheads (Rs. 1,00,000)	10
Variable Overheads(Direct)	5
Selling expenses (10% fixed)	13
Administration expenses (Rs. 50,000)	5
Distribution expenses (20% Fixed)	7
	Rs.155

(Ans. (a) Rs. 12,75,400 (b) Rs. 10,00,800)

8) A Company produces and sells three products : Product A, Product B and Product C. The Company has divided its market into two areas as North zone and South zone. The actual sales for the year 2003 were as follows :

Products	North Zone		South Zone	
	Price per Unit (Rs.)	No. of Units	Price per Unit (Rs.)	No. of Units
A	12	8,00,000	12	5,00,000
B	15	5,00,000	15	7,00,000
C	16	6,00,000	16	6,00,000

For the current year i.e, 2002, it is estimated that the sales of product A will go up by 10% in South zone and of Product C by 50,000 units in North zone. The company plans to launch an intensive advertisement campaign through which budgeted figures for product B are to be increased by 20% in both the zones.

There will be no change in the pries of the product A and C but the price of Product B will be reduced by Rs. 1.

You are required to prepare a sales budget for the year 2003.

Ans. :

	North (Units)	**South (Units)**	**Total Budget (Rs.)**
Product A	8,00,000	5,50,000	162,00,000
Product B	6,00,000	8,40,000	201,60,000
Product C	6,50,000	6,00,000	200,00,000)

9) Andhra Ltd has three sales division at Chennai, Bangalore and Hyderabad. It sells two products – I and II. The budgeted sales for the year ending 31st December, 2002 at each place are given below:

Chennai	Product I	50,000 units @ Rs. 16 each
	Product II	35,000 units @ Rs. 10 each
Bangalore	Product II	55,000 units @ Rs. 10 each
Hyderabad	Product I	75,000 units @ Rs. 16 each

The actual sales during the same period were :

Chennai	Product I	62,500 units @ Rs. 16 each
	Product II	37,500 units @ Rs. 10 each
Bangalore	Product II	62,500 units @ Rs. 10 each
Hyderabad	Product I	77,500 units @ Rs. 16 each

From the reports of the sales department it was estimated that the sales budget for the year ending 31st December, 2003 would be higher than 2002 budget in the following respects :

Chennai	Product I 4000 units
	Product II 2,500 units
Bangalore	Product II 6,500 units
Hyderabad	Product I 5,000 units

Intensive sales campaign in Bangalore and Hyderabad is likely to result in additional sales of 12, 500 units of Product I in Bangalore and 9,000 units of Product II in Hyderabad. Let us prepare a sales Budget for the period ending 31st December, 2003.

(Ans. : Chennai : Product I 54000 Units
Product II 37,500 Units

Bangalore : Product I – 12500 units
Product II 61,500 units

Hyderabad : Product I 80,000 units
Product II 9000 units)

10) Draw a Material Procurement Budget (Quantitative) from the following information:

Estimated sale of a product is 20,000 units. Each units of the product requires 3 units of material X and 5 units of Material Y.

Estimated opening balance at the commencement of the next year :

Finished product	2,500 kgs.
Material X	6,000 units
Material Y	10,000 units
Materials on Order :	
Material X	3,500 units
Material Y	5,500 units

The desirable closing balances at the end of the next year :

Finished Product	3,500 units
Material X	7,500 units
Material Y	12,500 units
Material on order :	
Material X	4,000 units
Material Y	5,000 units

11) The Sales Director of Asian Company expects to sell 25,000 units of a particular product next year. The Production Director consulted the storekeeper who gave the necessary details as follows :

Two kinds of raw material, P and Q are required for manufacturing the product. Each unit of the product requires 2 units of P and 3 units of Q. The estimated opening balance at the commencement of the next year are :

Finished product	:	5,000 units
Raw Material P	:	6,000 units
Raw Material Q	:	7,500 units

The desirable closing balance at the end of the next year are :

Finished Products	:	7,000 units
Raw Material P	:	6500 units
Raw Material Q	:	8000 units

Prepare a statement showing Material Purchase Budget for the next year.

(Ans. : Material required for 25,500 units : P - 54,500 units, Q - 81,500 units)

12) A company is expecting to have Rs. 50,000 cash in hand on 1st April, 2005 and it requires you to prepare an estimate of cash position during the three months, April to June 2005. The following information is supplied to you :

	Sales (Rs.)	**Purchases (Rs.)**	**Wages (Rs.)**	**Expenses (Rs.)**
February	1,40,000	80,000	16,000	12,000
March	1,60,000	1,00,000	16,000	14,000
April	1,84,000	1,04,000	18,000	14,000
May	2,00,000	1,20,000	20,000	16,000
June	2,40,000	110,000	24,000	18,000

Additional Information :

a) The credit period allowed by supplies is two months.

b) 25% of sales is for cash and credit period allowed to customers is one month.

c) Delay in payment of wages and expenses is one month.

d) Income tax Rs. 50,000 is to be paid in June 2005.

(Ans. : April Rs. 1,06,000, May Rs. 1,62,000, June Rs. 1,82,000)

13) A Company is expected to have Rs. 12,500 cash in hand on 1st July, 2005 and it requires you to prepare a cash budget for the period July, 2005 to September, 2005 from the following particulars :

	Sales (Rs.)	Purchases (Rs.)	Wages (Rs.)
May	90,000	62,400	6,000
June	96,000	72,000	7,000
July	54,000	1,21,500	5,500
August	87,000	1,23,000	5,000
September	63,000	1,34,000	7,500

Creditors are paid in the month following the month of purchase. 50% of credit sales are realised in the month following the credit sales and the remaining 50% in the second month following. Delay in the payment of wages is one month.

(Ans. Cash balance : July Rs. 26,500 (+), August Rs. 25,500 (–), September Rs. 83,000(–))

14) A company expects to have Rs. 37,500 cash in hand on 1st April, and requires you to prepare an estimate of cash position during the three months, April, May and June. The following information is supplied to you :

	Sales (Rs.)	Purchases (Rs.)	Wages (Rs.)	Factory Expenses (Rs.)	Office Expenses (Rs.)	Selling Expenses (Rs.)
February	75,000	45,000	9,000	7,500	6,000	4,500
March	84,000	48,000	9,750	8.250	6,000	4,500
April	90,000	52,500	10,500	9,000	6,000	5,250
May	1,20,000	60,000	13,500	11,250	6,000	6,570
June	1,35,000	60,000	14,250	14,000	7,000	7,000

Additional Information :

1) Period of credit allowed by suppliers 2 months

2) 20% of sales is for cash and period of credit allowed to customers for credit is one month

3) Delay in payment of all expenses – 1 month

4) Income tax of Rs. 57,500 is due to be paid on June 15th.

5) The company is to pay dividends to shareholders and bonus to workers of Rs. 15,000 and Rs. 22,500 respectively in the month of April.

6) Plant has been ordered to be received and paid in May. It will cost Rs. 1,20,000.

(Ans. : Cash balance : April (+) Rs. 11,700, May (–) Rs. 91,050, June (–) Rs. 1,15,370)

15) From the following information, you are required to prepare cash budget according to Adjusted Profit and Loss method as well as Balance Sheet method.

Balance Sheet as on 1-1-2005

Liabilities	Rs.	Assets	Rs.
Share Capital	5,00,000	Debtors	5,00,000
Reserves	10,00,000	Stock and Stores	3,00,000
Debentures	3,00,000	Fixed assets	13,00,000
Public deposits	2,00,000	Cash balance	1,00,000
Current liability	2,00,000		
	22,00,000		22,00,000

Projected Trading and Profit and Loss A/c for the year ending 31-12-2005

Particulars	Rs.	Particulars	Rs.
To Opening Stock	3,00,000	By Sales	15,00,000
To Direct Cost of Production	12,00,000	By Closing Stock	6,00,000
To Depreciation	1,00,000		
To Variable selling and distribution costs	2,00,000		
To Net profit c/d	3,00,000		
	21,00,000		21,00,000
To Dividends	50,000	By Net Profit b/d	3,00,000
To Balance c/d	2,50,000		
	3,00,000		3,00,000

Additional Information :

Collection of debtors and sales proceeds during the year Rs. 17,00,000, refund of public deposits Rs. 1,00,000, increase in current liability Rs. 50,000

(Ans. : Cash balance as on 31.12.2005 : Rs. 3,00,000, Debtors as on 31.12.2005 : Rs. 3,00,000 (Opening debtors Rs. 5,00,000 + Sales Rs. 15,00,000 – Collection from debtors Rs. 17,00,000)

16) From the following information prepare a cash budget under the Adjusted Profit and Loss Account Method and Balance Sheet Method.

Balance Sheet as on 1-1-2005

Liabilities	Rs.	Assets	Rs.
Share capital	50,000	Land and buildings	30,000
Capital reserve	5,000	Plant and Machinery	20,000
Profit and loss a/c	9,000	Furniture and fixtures	5,000
Debentures	10,000	Closing stock	4,000
Creditors	28,800	Debtors	26,000
Accrued expenses	200	Bank	18,000
	1,03,000		1,03,000

Forecast Trading, and Profit and Loss Account
For the Year ending 31-12-2005

Particulars		Rs.	Particulars	Rs.
Opening Stock		4,000	Sales	80,000
Purchases		60,000	Closing Stock	10,000
Gross Profit c/d		26,000		
		90,000		90,000
Salary and wages	2500		Gross profit b/d	26,000
Add Outstanding	500	3000	Interest received	100
Depreciation :				
Plant and Machinery		2,000		
Furniture and fixture		1,000		
Administrative expenses		3,500		
Selling expenses		2,500		
Net Profit c/d		14,100		
		26,100		26,100
Dividend paid		10,000	Balance b/d	9,000
Balance c/d		13,100	Net profit b/d	14,100
		23,100		23,100

The following are the additional information for the year 2005 : shares were issued for Rs. 10,000, and debentures were issued for Rs. 2,000.

On 31-12-2005, the accrued expenses were Rs. 500, Debtors Rs. 20,000, Creditors Rs. 30,000, and Land and buildings, Rs. 40,000.

(Ans : Cash balance as on 31.12.2005 : Rs. 28,600, Balance Sheet total : Rs.1,20,600)

Note : These questions will help you to understand the unit better. Try to write answers for them. But do not submit your answers to the University. These are for your practice only.

9.18 FURTHER READINGS

Edward B. Deakin and Michael W. Maher, *Cost Accounting*, Richard D. Erwin, inc., Homewood, Illinois.

Lal Nigam B.M. and Sharma G.L., *Advanced Cost Accounting*, Himalaya Publishing House, Bombay-4.