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Subject – Marketing Management

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2.1 BUDGETS AND BUDGETORY CONTROL

Introduction:

To achieve the organizational objectives, an enterprise should be managed effectively and efficiently. It is facilitated by chalking out the course of action in advance. Planning, the primary function of management helps to chalk out the course of actions in advance. But planning is to be followed by continuous comparison of the actual performance with the planned performance, i. e., controlling. One systematic approach in effective follow up process is budgeting. Different budgets are prepared by the enterprise for different purposes. Thus, budgeting is an integral part of management.

Definition of Budget:

„A budget is a comprehensive and coordinated plan, expressed in financial terms, for the operations and resources of an enterprise for some specific period in the future". **(Fremgen, James M – Accounting for Managerial Analysis)**

„A budget is a predetermined detailed plan of action developed and distributed as a guide to current operations and as a partial basis for the subsequent evaluation of performance". **(Gordon and Shillinglaw)**

„A budget is a financial and/or quantitative statement, prepared prior to a defined period of time, of the policy to be pursued during the period for the purpose of attaining a given objective". **(The Chartered Institute of Management Accountants, London)**

Elements of Budget:

The basic elements of a budget are as follows:-

1. It is a comprehensive and coordinated plan of action.
2. It is a plan for the firm‟s operations and resources.
3. It is based on objectives to be attained.
4. It is related to specific future period.
5. It is expressed in financial and/or physical units.

Budgeting:

Budgeting is the process of preparing and using budgets to achieve management objectives. It is the systematic approach for accomplishing the planning, coordination, and control responsibilities of management by optimally utilizing the given resources.

„The entire process of preparing the budgets is known as Budgeting‟ **(J. Batty)**

„Budgeting may be said to be the act of building budgets‟ **(Rowland &Harr) Elements**

of Budgeting:

1. A good budgeting should state clearly the firm‟s expectations and facilitate their attainability.
2. A good budgeting system should utilize various persons at different levels while preparing the budgets.
3. The authority and responsibility should be properly fixed.
4. Realistic targets are to be fixed.
5. A good system of accounting is also essential.
6. Wholehearted support of the top management is necessary.
7. Budgeting education is to be imparted among the employees.
8. Proper reporting system should be introduced.
9. Availability of working capital is to be ensured.

Definition of Budgetary Control:

CIMA, London defines budgetary control as, "the establishment of the budgets relating to the responsibility of executives to the requirements of a policy and the continuous comparison of actual with budgeted result either to secure by individual action the objectives of that policy or to provide a firm basis for its revision"

„Budgetary Control is a planning in advance of the various functions of a business so that the business as a whole is controlled". **(Wheldon)**

„Budgetary Control is a system of controlling costs which includes the preparation of budgets, coordinating the department and establishing responsibilities, comprising actual performance with the budgeted and acting upon results to achieve maximum profitability". **(Brown and Howard)**

Elements of budgetary control:

1. Establishment of budgets for each function and division of the organization.
2. Regular comparison of the actual performance with the budget to know the variations from budget and placing the responsibility of executives to achieve the desire result as estimated in the budget.
3. Taking necessary remedial action to achieve the desired objectives, if there is a variation of the actual performance from the budgeted performance.
4. Revision of budgets when the circumstances change.
5. Elimination of wastes and increasing the profitability.

Budget, Budgeting and Budgetary Control:

A budget is a blue print of a plan expressed in quantitative terms. Budgeting is a technique for formulating budgets. Budgetary Control refers to the principles, procedures and practices of achieving given objectives through budgets.

According to Rowland and William, „Budgets are the individual objectives of a department, whereas Budgeting may be the act of building budgets. Budgetary control embraces all and in addition includes the science of

planning the budgets to effect an overall management tool for the business planning and control".

Objectives of Budgetary Control

Budgetary Control assists the management in the allocation of responsibilities and is a useful device to estimate and plan the future course of action. The general objectives of budgetary control are as follows:

1. Planning:

(a) A budget is an action plan as it is prepared after a careful study and research.

(b) A budget operates as a mechanism through which objectives and policies are carried out.

(c) It is a communication channel among various levels of management.

(d) It is helpful in selecting a most profitable alternative.

(e) It is a complete formulation of the policy of the concern to be pursued for attaining given objectives.

2. Co-ordination:

It coordinates various activities of the business to achieve its common objectives. It induces the executives to think and operate as a group.

3. Control:

Control is necessary to judge that the performance of the organization confirms to the plans of business. It compares the actual performance with that of the budgeted performance, ascertains the deviations, if any, and takes corrective action at once.

Installation of Budgetary Control:

There are certain steps necessary to install a good budgetary control system in an organization. They are as follows:

1. Determination of the Objectives
2. Organization for Budgeting
3. Budget Centre

4. Budget Officer
5. Budget Manual
6. Budget Committee
7. Budget Period
8. Determination of Key Factor

1. Determination of Objectives:

It is very clear that the installation of a budgetary control system presupposes the determination of objectives sought to be achieved by the organization in clear terms.

2. Organization for Budgeting:

Having determined the objectives clearly, proper organization is essential for the successful preparation, maintenance and administration of budgets. The responsibility of each executive must be clearly defined. There should be no uncertainty regarding the jurisdiction of executives.

3. Budget Centre:

It is that part of the organization for which the budget is prepared. It may be a department or any other part of the department. It is essential for the appraisal of performance of different departments so as to make them responsible for their budgets.

4. Budget Officer:

A Budget Officer is a convener of the budget committee. He coordinates the budgets of various departments. The managers of different departments are made responsible for their department‟s performance.

5. Budget Manual:

It is a document which defines the objectives of budgetary control system. It spells out the duties and responsibilities of budget officers regarding the preparation and execution of budgets. It also specifies the relations among various functionaries.

6. Budget Committee:

The heads of all important departments are made members of this committee. It is responsible for preparation and execution of budgets. The members of this committee may sometimes take collective decisions, if necessary. In small concerns, the accountant is made responsible for the same work.

7. Budget Period:

It is the period for which a budget is prepared. It depends upon a number of factors. It may be different for different concerns/functions. The following are the factors that may be taken into consideration while determining budget period:

a. The type of budget,
b. The nature of demand for the products,
c. The availability of finance,
d. The economic situation of the cycle and
e. The length of trade cycle

8. Determination of Key Factor:

Generally, the budgets are prepared for all functional areas of the business. They are inter related and inter dependent. Therefore, a proper coordination is necessary. There may be many factors that influence the preparation of a budget.
For example, plant capacity, demand position, availability of raw materials, etc. Some factors may have an impact on other budgets also. A factor which influences all other budgets is known as Key factor. The key factor may not remain the same. Therefore, the organization must pay due attention on the key factor in the preparation and execution of budgets.

Types of Budgeting:

Budget can be classified into three categories from different points of view.

They are:

1. According to Function

2. According to Flexibility
3. According to Time

I. According to Function:

(a) Sales Budget:

The budget which estimates total sales in terms of items, quantity, value, periods, areas, etc is called Sales Budget.

(b) Production Budget:

It estimates quantity of production in terms of items, periods, areas, etc. It is prepared on the basis of Sales Budget.

(c) Cost of Production Budget:

This budget forecasts the cost of production. Separate budgets may also be prepared for each element of costs such as direct materials budgets, direct labour budget, factory materials budgets, office overheads budget, selling and distribution overheads budget, etc.

(d) Purchase Budget:

This budget forecasts the quantity and value of purchase required for production. It gives quantity wise, money wise and period wise particulars about the materials to be purchased.

(e) Personnel Budget:

The budget that anticipates the quantity of personnel required during a period for production activity is known as Personnel Budget.

(f) Research Budget:

The budget relates to the research work to be done for improvement in quality of the products or research for new products.

(g) Capital Expenditure Budget:

The budget provides a guidance regarding the amount of capital that may be required for procurement of capital assets during the budget period.

(h) Cash Budget:

This budget is a forecast of the cash position by time period for a specific duration of time. It states the estimated amount of cash receipts and estimation of cash payments and the likely balance of cash in hand at the end of different periods.

(i) Master Budget:

It is a summary budget incorporating all functional budgets in a capsule form. It interprets different functional budgets and covers within its range the preparation of projected income statement and projected balance sheet.

II. According to Flexibility:

On the basis of flexibility, budgets can be divided into two categories. They are:

1.Fixed

Budget

2.Flexible

Budget

1. Fixed Budget:

Fixed Budget is one which is prepared on the basis of a standard or a fixed level of activity. It does not change with the change in the level of activity.

2. Flexible Budget:

A budget prepared to give the budgeted cost of any level of activity is termed as a flexible budget. According to CIMA, London, a Flexible Budget is, „a budget designed to change in accordance with level of activity attained". It is prepared by taking into account the fixed and variable elements of cost.

III. According to Time:

On the basis of time, the budget can be classified as follows:

1. Long term budget
2. Short term budget
3. Current budget
4. Rolling budget

1. Long-term Budget:

A budget prepared for considerably long period of time, viz., 5 to 10 years is called Long-term Budget. It is concerned with the planning of operations of the firm. It is generally prepared in terms of physical quantities.

2. Short-term Budget:

A budget prepared generally for a period not exceeding 5 years is called Shortterm Budget. It is generally prepared in terms of physical quantities and in monetary units.

3. Current Budget:

It is a budget for a very short period, say, a month or a quarter. It is adjusted to current conditions. Therefore, it is called current budget.

4. Rolling Budget:

It is also known as Progressive Budget. Under this method, a budget for a year in advance is prepared. A new budget is prepared after the end of each month/quarter for a full year ahead. The figures for the month/quarter which has rolled down are dropped and the figures for the next month/quarter are added. This practice continues whenever a month/quarter ends and a new month/quarter begins

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PREPARATION OF BUDGETS: I.

SALES BUDGET:

Sales budget is the basis for the preparation of other budgets. It is the forecast of sales to be achieved in a budget period. The sales manager is directly responsible for the preparation of this budget. The following factors taken into

consideration:

a. Past sales figures and trend
b. Salesmen‟s estimates
c. Plant capacity
d. General trade position
e. Orders in hand
f. Proposed expansion
g. Seasonal fluctuations
h. Market demand
i. Availability of raw materials and other supplies
j. Financial position
k. Nature of competition
l. Cost of distribution
m. Government controls and regulations
n. Political situation.

Example

1. The Royal Industries has prepared its annual sales forecast, expecting to achieve sales of Rs.30,00,000 next year. The Controller is uncertain about the pattern of sales to be expected by month and asks you to prepare a monthly budget of sales. The following sales data pertained to the year, which is considered to be representative of a normal year:

Month	Sales (Rs.)	Month	Sales (Rs.)
January	1,10,000	July	2,60,000
February	1,15,000	August	3,30,000
March	1,00,000	September	3,40,000
April	1,40,000	October	3,50,000
May	1,80,000	November	2,00,000
June	2,25,000	December	1,50,000

Prepare a monthly sales budget for the coming year on the basis of the above data.

Answer:

Sales Budget

Month	Sales (given)	Sales estimation based on cash sales ratio given
January	1,10,000	(1,10,000/25,00,000) x 30,00,000 = 1,32,000
February	1,15,000	(1,15,000/25,00,000) x 30,00,000 = 1,38,000
March	1,00,000	(1,00,000/25,00,000) x 30,00,000 = 1,20,000
April	1,40,000	(1,40,000/25,00,000) x 30,00,000 = 1,68,000
May	1,80,000	(1,80,000/25,00,000) x 30,00,000 = 2,16,000
June	2,25,000	(2,25,000/25,00,000) x 30,00,000 = 2,70,000
July	2,60,000	(2,60,000/25,00,000) x 30,00,000 = 3,12,000
August	3,30,000	(3,30,000/25,00,000) x 30,00,000 = 3,96,000
September	3,40,000	(3,40,000/25,00,000) x 30,00,000 = 4,08,000
October	3,50,000	(3,50,000/25,00,000) x 30,00,000 = 4,20,000
November	2,00,000	(2,00,000/25,00,000) x 30,00,000 = 2,40,000
December	1,50,000	(1,50,000/25,00,000) x 30,00,000 = 1,80,000
Total	**25,00,000**	**30,00,000**

Note: Sales budget is prepared based on last year‟s month-wise sales ratio.

Example:

2. M/s. Alpha Manufacturing Company produces two types of products, viz., Raja and Rani and sells them in Chennai and Mumbai markets. The following information is made available for the current year:

Market	Product	Budgeted Sales	Actual Sales
Chennai	Raja	400 units @ Rs.9 each	500 units @ Rs.9 each
,,	Rani	300 units @ Rs.21 each	200 units @ Rs.21 each
Mumbai	Raja	600 units @ Rs.9 each	700 units @ Rs.9 each
	Rani	500 units @ Rs.21 each	400 units @ Rs.21 each

Market studies reveal that Raja is popular as it is under priced. It is observed that if its price is increased by Re.1 it will find a readymade market. On the other hand, Rani is over priced and market could absorb more sales if its 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	
	Chennai	Mumbai
Raja	+10%	+ 5%
Rani	+ 20%	+ 10%

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

Product	Chennai	Mumbai
Raja	60 units	70 units
Rani	40 units	50 units

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

Answer:

Sales Budget

Area	Product	Budget for current year			Actual sales			Budget for future period		
		Units	Price Rs.	Value Rs.	Units	Price Rs.	Value Rs.	Units	Price Rs.	Value Rs.
Chennai	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 Sales		**1800**		**25800**	**1800**		**23400**	**2200**		**32000**

Workings:

1. Budgeted sales for Chennai:

	Raja Units	Rani Units
Budgeted Sales	400	300
Add: Increase	(10%) 40	(20%) 60
	440	360
Increase due to advertisement	60	40
Total	500	400

2. Budgeted sales for Mumbai:

	Raja Units	Rani Units
Budgeted Sales	600	500
Add: Increase	(5%) 30	(10%) 50
	630	550
Increase due to advertisement	70	50
Total	700	600

II. PRODUCTION BUDGET:

Production = Sales + Closing Stock – Opening Stock Example:

3. The sales of a concern for the next year is estimated at 50,000 units. Each unit of the product requires 2 units of Material „A" and 3 units of Material

„B". The estimated opening balances at the commencement of the next year are:

Finished Product	:	10,000 units
Raw Material „A"	:	12,000 units
Raw Material „B"	:	15,000 units

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

Finished Product	:	14,000 units
Raw Material „A"	:	13,000 units
Raw Material „B"	:	16,000 units

Prepare the materials purchase budget for the next year.

Answer:

Production Budget

Estimated Sales	50,000 units
Add: Estimated Closing Finished Goods	14,000 ,,
	64,000 ,,
Less: Estimated Opening Finished Goods	10,000 ,,
Production	54,000 ,,

Materials Purchase Budget

	Material „A"	Material „B"
Material Consumption	1,08,000 units	1,62,000 units
Add: Closing stock of materials	13,000 ,,	16,000 ,,
	1,21,000 ,,	**1,78,000 ,,**
Less: Opening stock of materials	12,000 ,,	15,000 ,,
Materials to be purchased	**1,09,000 ,,**	**1,63,000 ,,**

Workings:

Materials consumption:	Material „A"	Material „B"
Material required per unit of production	2 units	3 units
For production of 54,000 units	1,08,000	1,62,000

III. CASH BUDGET:

It is an estimate of cash receipts and disbursements during a future period of time. "The Cash Budget is an analysis of flow of cash in a business over a

future, short or long period of time. It is a forecast of expected cash intake and outlay" (Soleman, Ezra – Handbook of Business administration).

Procedure for preparation of Cash Budget:

1. First take into account the opening cash balance, if any, for the beginning of the period for which the cash budget is to be prepared.
2. Then Cash receipts from various sources are estimated. It may be from cash sales, cash collections from debtors/bills receivables, dividends, interest on investments, sale of assets, etc.
3. The Cash payments for various disbursements are also estimated. It may be for cash purchases, payment to creditors/bills payables, payment to revenue and capital expenditure, creditors for expenses, etc.
4. The estimated cash receipts are added to the opening cash balance, if any.
5. The estimated cash payments are deducted from the above proceeds.
6. The balance, if any, is the closing cash balance of the month concerned.
7. The closing cash balance is taken as the opening cash balance of the following month.
8. Then the process is repeatedly performed.
9. If the closing balance of any month is negative i.e the estimated cash payments exceed estimated cash receipts, then overdraft facility may also be arranged suitably.

Example:

4. From the following budgeted figures prepare a Cash Budget in respect of three months to June 30, 2006.

Month	Sales Rs.	Materials Rs.	Wages Rs.	Overheads Rs.
January	60,000	40,000	11,000	6,200
February	56,000	48,000	11,600	6,600
March	64,000	50,000	12,000	6,800

April	80,000	56,000	12,400	7,200
May	84,000	62,000	13,000	8,600
June	76,000	50,000	14,000	8,000

Additional information:

1. Expected Cash balance on 1st April, 2006 – Rs. 20,000
2. Materials and overheads are to be paid during the month following the month of supply.
3. Wages are to be paid during the month in which they are incurred.
4. All sales are on credit basis.
5. The terms of credits are payment by the end of the month following the month of sales: Half of credit sales are paid when due the other half to be paid within the month following actual sales.
6. 5% sales commission is to be paid within in the month following sales
7. Preference Dividends for Rs. 30,000 is to be paid on 1st May.
8. Share call money of Rs. 25,000 is due on 1st April and 1st June.
9. Plant and machinery worth Rs. 10,000 is to be installed in the month of January and the payment is to be made in the month of June.

Answer:

Cash Budget for three months from April to June, 2006

Particulars	April Rs.	May Rs.	June Rs.
Opening Cash Balance	20,000	32,000	(-) 5,600
Add: Estimated Cash Receipts:			
Sales Collection from debtors	60,000	72,000	82,000
Share call money	25,000		25,000

	1,05,000	1,04,600	1,01,400
Less: Estimated Cash Payments:			
Materials			62,000
Wages	50,000	56,000	14,000
Overheads	12,400	13,000	8,600
Sales Commission	6,800	7,200	4,200
Preference Dividend	3,200	4,000	
Plant and Machinery	---	30,000	---
	---	---	10,000
	72,400	1,10,200	98,800
Closing Cash Balance	32,600	(-) 5,600	2,600

Workings:

1. Sales Collection:

Payment is due at the month following the sales. Half is paid on due and other half is paid during the next month. Therefore, February sales Rs. 50,000 is due at the end of March. Half is given at the end of March and other half is given in the next month i.e., in the month of April. Hence, the sales collection for the month of April will be as follows:

For April – Half of February Sales (56,000 x ½) = 28,000

- Half of March Sales (64,000 x ½) = 32,000

Total Collection for April = 60,000

Similarly, the sales collection for the months of May and June may be calculated.

2. Materials and overheads:

These are paid in the following month. That is March is paid in April, April is paid in May and May is paid in June.

3. Sales Commission:

It is paid in the following month. Therefore,

For April – 5% of March Sales (64,000 x 5 /100) = 3,200

For May – 5% of March Sales (80,000 x 5 /100) = 4,000

For April – 5% of March Sales (84,000 x 5 /100) = 4,200

IV. FLEXIBLE BUDGET:

A flexible budget consists of a series of budgets for different level of activity. Therefore, it varies with the level of activity attained. According to CIMA, London, A Flexible Budget is, „a budget designed to change in accordance with level of activity attained". It is prepared by taking into account the fixed and variable elements of cost. This budget is more suitable when the forecasting of demand is uncertain.

Points to be remembered while preparing a flexible budget:

1. Cost can be classified into fixed and variable cost.
2. Total fixed cost remains constant at any level of activity.
3. Total Variable cost varies in the same proportion at which the level of activity varies.
4. Fixed and variable portion of Semi-variable cost is to be segregated.

Example:

5. The following information at 50% capacity is given. Prepare a flexible budget and forecast the profit or loss at 60%, 70% and 90% capacity.

Fixed expenses:	Expenses at 50% capacity (Rs.)
Salaries	5,000
Rent and taxes	4,000
Depreciation	6,000
Administrative expenses	7,000
Variable expenses:	
Materials	20,000
Labour	25,000
Others	4,000
Semi-variable expenses:	

Repairs	10,000
Indirect Labour	15,000
Others	9,000

It is estimated that fixed expenses will remain constant at all capacities. Semivariable expenses will not change between 45% and 60% capacity, will rise by 10% between 60% and 75% capacity, a further increase of 5% when capacity crosses 75%.

Estimated sales at various levels of capacity are:

Capacity	Sales (Rs.)
60%	1,10,000
70%	1,30,000
90%	1,50,000

Answer:

FLEXIBLE BUDGET

(Showing Profit & Loss at various capacities)

Particulars	Capacities			
	50%	60%	70%	90%
	Rs.	Rs.	Rs.	Rs.
Fixed Expenses:				
Salaries	5,000	5,000	5,000	5,000
Rent and taxes	4,000	4,000	4,000	4,000
Depreciation	6,000	6,000	6,000	6,000
Administrative expenses	7,000	7,000	7,000	7,000
Variable expenses:				
Materials	20,000	24,000	28,000	36,000
Labour	25,000	30,000	35,000	45,000
Others	4,000	4,800	5,600	7,200
Semi-variable expenses:				
Repairs	10,000	10,000	11,000	11,500
Indirect Labour	15,000	15,000	16,500	17,250

Others	9,000	9,000	9,900	10,350
Total Cost	1,05,000	1,14,800	1,28,000	1,49,300
Profit (+) or Loss (-)		(-) 4,800	(+) 2,000	(+) 700
Estimated Sales		1,10,000	1,30,000	1,50,000

Example:

6. The following information relates to a flexible budget at 60% capacity. Find out the overhead costs at 50% and 70% capacity and also determine the overhead rates:

Particulars	Expenses at 60% capacity
Variable overheads:	Rs.
Indirect Labour	10,500
Indirect Materials	8,400
Semi-variable overheads:	
Repair and Maintenance (70% fixed; 30% variable)	7,000
Electricity (50% fixed; 50% variable)	25,200
Fixed overheads:	
Office expenses including salaries	70,000
Insurance	4,000
Depreciation	20,000
Estimated direct labour hours	**1,20,000 hours**

Answer:

FLEXIBLE BUDGET

	50 % Capacity	60% Capacity	70% Capacity

	Rs.	Rs.	Rs.
Variable overheads:			
Indirect Labour	8,750	10,500	12,250
Indirect Materials	7,000	8,400	
Semi-variable overheads:			
Repair and Maintenance (1)	6,650	7,000	
Electricity (2)	23,100	25,200	
Fixed overheads:			
Office expenses including salaries	70,000	70,000	70,000
Insurance	4,000	4,000	4,000
Depreciation	20,000	20,000	20,000
Total overheads	**1,39,500**	**1,45,100**	**1,50,700**
Estimated direct labour hours	1,00,000	1,20,000	1,50,000
Overhead rate per hour (Rs.)	1.395	1.21	1.077

Workings:

1. The amount of Repairs and maintenance at 60% Capacity is Rs. 7,000. Out of this, 70% (i.e Rs. 4,900) is fixed and remaining 30% (i.e Rs. 2,100) is variable. The fixed portion remains constant at all levels of capacities. Only the variable portion will change according to change in the level of activity. Therefore, the total amount of repairs and maintenance for 50% and 70% capacities are calculated as follows:

Repairs and maintenance	50%	**60%**	70%
Fixed (70%)	4,900	**4,900**	4,900
Variable (30%)	1,750	**2,100**	2,450

Total	6,650	**7,000**	7,350

2. Similarly, electricity expenses at different levels of capacity are calculated as follows:

Electricity	50%	**60%**	70%
Fixed (50%)	12,600	**12,600**	12,600
Variable (50%)	10,500	**12,600**	14,700
Total	23,100	**25,200**	27,300

ZERO BASE BUDGETING (ZBB)

It is a management technique aimed at cost reduction. It was introduced by the U. S. Department of Agriculture in 1961. Peter A. Phyrr popularized it. In 1979, president Jimmy Carte issued a mandate asking for the use of ZBB by the Government.

ZBB - Definition:

"It is a planning and budgeting process which requires each manager to justify his entire budget request in detail from scratch (Zero Base) and shifts the burden of proof to each manager to justify why he should spend money at all. The approach requires that all activities be analyzed in decision packages, which are evaluated by systematic analysis and ranked in the order of importance". – Peter A. Phyrr.

It implies that-

- Every budget starts with a zero base
- No previous figure is to be taken as a base for adjustments
- Every activity is to be carefully examined afresh
- Each budget allocation is to be justified on the basis of anticipated circumstances
- Alternatives are to be given due consideration **Advantages of ZBB:**

1. Effective cost control can be achieved
2. Facilitates careful planning
3. Management by Objectives becomes a reality
4. Identifies uneconomical activities
5. Controls inefficiencies
6. Scarce resources are used beneficially
7. Examines each activity thoroughly
8. Controls wasteful expenditure
9. Integrates the management functions of planning and control
10. Reviews activities before allowing funds for them.

PERFORMANCE BUDGETING:

It involves evaluation of the performance of the organization in the context of both specific as well as overall objectives of the organization. It provides a definite direction to each employee and a control mechanism to top management.

Definition:

Performance Budgeting technique is the process of analyzing, identifying, simplifying and crystallizing specific performance objectives of a job to be achieved over a period of the job. The technique is characterized by its specific direction towards the business objectives of the organization. – The National Institute of Bank Management.

The responsibility for preparing the performance budget of each department lies on the respective departmental head. It requires preparation of performance reports. This report compares budget and actual data and shows any existing variances. To facilitate the preparation the departmental head is supplied with the copy of the master budget appropriate to his function.

MASTER BUDGET:

Master budget is a comprehensive plan which is prepared from and summarizes the functional budgets. The master budget embraces both

operating decisions and financial decisions. When all budgets are ready, they can finally produce budgeted profit and loss account or income statement and budgeted balance sheet. Such results can be projected monthly, quarterly, half-yearly and at year end. When the budgeted profit falls short of target it may be reviewed and all budgets may be reworked to reach the target or to achieve a revised target approved by the budget committee.

Exercise:

1. From the following particulars, prepare production cost budget for June,2006.

Particulars	Opening Stock (1-6-2006)	Closing stock (30-6-2006)
Finished Goods	1200 units	1600 units
Raw Material „A"	5,000 kgs.	4,800 kgs.
Raw Material „B"	2,000 kgs.	3,100 kgs.
Raw Material required (per unit)	4 kgs. @ Rs.8 per kg.	2 kgs. @ Rs.25 per kg.

Budgeted sales for the month – 7,000 units.

(Answer: Raw Material „A" – Rs. 2,35,200; Raw Material „B" – Rs. 3,97,500)

2. From the following figures prepare Raw Materials Purchase Budget.

Materials (in Units)

Particulars	A	B	C	D
Estimated Opening Stock	16,000	6,000	24,000	2,000
Estimated Closing Stock	20,000	8,000	28,000	4,000
Estimated Consumption	1,20,000	44,000	1,32,000	36,000
Standard Price per unit	0.25 p	0.05 p	0.15 p	0.10 p

(Answer: Material „A" – Rs. 31,000; Material „B" – Rs. 2,300; Material „C" – Rs.20,400 and Material „D" – Rs. 3,800)

3. Parker Ltd. manufactures two brands of pen Hero and Zero. The sales department of the company has three departments in different areas of the country.

The sales budget for the year ending 31st December 1999 were:

Hero – Department I 3,00,000; Department II 5,62500; Department III 1,80,000 and Zero – Department I 4,00,000; Department II 6,00,000; Department III 20,000. Sales prices are Rs. 3 and Rs.1.20 in all departments.

It is estimated that by forced sales promotion the sale of Zero in department I will increase by 1,75,000. It is also expected that by increasing production and arranging extensive advertisement, Department III will be enabled to increase the sale of Zero by 50,000. It is recognized that the estimated sales by department II represent an unsatisfactory target. It is agreed to increase both estimates by 20%. Prepare a Sales Budget for the year 2000.

(Answer: Hero – Rs.34,65,000 and Zero – Rs.16,38,000)

4. Bajaj Co. wishes to arrange overdraft facilities with its bankers during the period from April to June 2006 when it will be manufacturing mostly for stock. Prepare a Cash Budget for the above period from the following data, indicating the extent of the band overdraft facilities the company will require at the end of each month.

(a)

Month	Sales Rs.	Purchases Rs.	Wages Rs.
February	90,000	62,400	6,000
March	96,000	72,000	7,000
April	54,000	1,21,000	5,500
May	87,000	1,23,000	5,000
June	63,000	1,34,000	7,500

(b) 50% of Credit sales are realized in the month following the sales and the remaining 50% in the second month following.

(c) Creditors are paid in the month following the month of purchase.

(d) Lag in payment of wages – one month.

(e) Cash at bank on 1st April, 2006 estimated at Rs. 12,500.

Answer: Closing balance for April – Rs. 26,500; May Rs. (25,500) and June Rs. (83,000)

5. Draw up a Cash Budget for January to March 2006 from the following information:

(a). Cash and bank balance on 1st January, 2006 – Rs. 2,00,000.

(b). Actual and budgeted sales:

Actual 2005	Rs.	Budgeted 2006	Rs.
September	6,00,000	January	8,00,000
October	6,50,000	February	8,20,000
November	7,00,000	March	8,90,000
December	7,50,000		

(c). Purchases – actual and budgeted:

Actual 2005	Rs.	Budgeted 2006	Rs.
September	3,60,000	January	4,80,000
October	4,00,000	February	4,00,000
November	4,80,000	March	5,00,000
December	4,50,000		

(d). Wages – actual and budgeted:

	Month	Wages (Rs.)	Expenses (Rs.)
Actual 2005	November	1,50,000	50,000
„ „	December	1,50,000	60,000
Budgeted 2006	January	1,80,000	60,000
„ „	February	1,80,000	80,000
„ „	March	2,00,000	80,000

(e) Special items:

(i) Advance Payment of tax in March 2006 – Rs. 50,000 (ii)

Plant to be acquired and paid in January 2006 – Rs. 1,00,000

(f) Assume 10 % sales and purchases are on cash basis.

(g) Lag in payment of wages – ½ month

(h) Lag in payment of expenses – ¼ month

(i) Period of credit allowed to debtors – 2 month

(j) Period of credit allowed by creditors – 1 month

(Answer: January – Rs.1,32,000; February – Rs.1,62,000 and March – Rs. 2,41,000)

6. From the following forecasts of income and expenditure, prepare a cash Budget for the month January to April, 2006.

Months	Sales (Credit) Rs.	Purchases (Credit) Rs.	Wages Rs.	Manufacturing expenses Rs.	Administrative expenses Rs.	Selling expenses Rs.
2005 Nov.	30,000	15,000	3,000	1,150	1,060	500
Dec.	35,000	20,000	3,200	1,225	1,040	550
2006 Jan.	25,000	15,000	2,500	990	1,100	600
Feb.	30,000	20,000	3,000	1,050	1,150	620
Mar.	35,000	22,500	2,400	1,100	1,220	570
Apr.	40,000	25,000	2,600	1,200	1,180	710

Additional information is as follows:

1. The customers are allowed a credit period of 2 months.
2. A dividend of Rs. 10,000 is payable in April.
3. Capital expenditure to be incurred: Plant purchased on 15th of January for Rs.5,000;
4. A building has been purchased on 1st March and the payments are to be made in monthly instalments of Rs. 2,000 each.
5. The creditors are allowing a credit of 2 months.
6. Wages are paid on the 1st of the next month.
7. Lag in payment of other expenses is one month.
8. Balance of cash in hand on 1st January, 2006 is Rs. 15,000

(Answer: Closing balance for January – Rs. 18,985; February Rs. 28,795; March Rs. 30,975 and April Rs. 23,685)

7. From the following budget date, forecast the cash position at the end of April, May and June 2006.

Months	Sales (Rs.)	Purchases (Rs.)	Wages (Rs.)	Mis. Expenses (Rs.)
February	1,20,000	84,000	10,000	7,000
March	1,30,000	1,00,000	12,000	8,000
April	80,000	1,04,000	8,000	6,000
May	1,16,000	1,06,000	10,000	12,000
June	88,000	80,000	8,000	6,000

Additional information:

1. Sales: 20% realized in the month of sale; discount allowed 2%. Balance realized equally in two subsequent months.
2. Purchases: These are paid in the month following the month of supply.
3. Wages: 25% paid in arrears following month.
4. Miscellaneous expenses: Paid a month in arrears.
5. Rent: Rs.1,000 per month paid quarterly in advance due in April.
6. Income Tax : First instalment of advance tax Rs. 25,000 due on or before 15th June.
7. Income from investments: Rs. 5,000 received quarterly in April, July, etc.
8. Cash in hand: Rs. 5,000 on 1st April, 2006.

(Answer: April – Rs. 5,680; May – Rs. (-) 7,084 and June – Rs. (-) 62,936

8. The Expenses for the production of 5,000 units in a factory are given as follows:

Particulars	Per unit (Rs.)
Materials	50
Labour	20
Variable Overheads	15
Fixed Overheads (Rs. 50,000)	10
Administrative Overheads (5% variable)	10
Selling expenses (20% fixed)	6
Distribution expenses (10% fixed)	5

Total cost of sales per unit	Rs. 110

You are required to prepare a budget for the production of 7,000 units.

(Answer Total cost of sales Rs. 7,69,000; Total cost of sales per unit Rs. 109.94)

9. Draw up a flexible budget for the overhead expenses on the basis of the following data and determine the overhead rate at 70%, 80% and 90% plant capacity.

Particulars	At 70 % capacity	At 80% capacity	At 90% capacity
Variable overheads:		Rs.	
Indirect Labour	-	12,000	-
Stores including spares	-	4,000	-
Semi-variable overheads:			
Power (30% fixed; 70% variable)	-	20,000	-
Repairs (60% fixed; 40% variable)	-	2,000	-
Fixed overheads:			
Depreciation	-	11,000	-
Insurance	-	3,000	-
Salaries	-	10,000	-
Total Overheads	-	**62,000**	-
Estimated direct labour hours	**-**	**124000 hrs**	**-**

(Answer: Overhead rate at 70% - Rs. 0.536; at 80% - Rs. 0.50 and at 90% - Rs. 0.472)

10. The cost of an article at a capacity level of 5,000 units is given under „A" below. For a variation of 25% in capacity above or below this level, the individual expenses as indicated under „B" below:

Cost per unit Rs. 12.55. Find out the cost per unit and total cost for production levels of 4,000 units and 6,000 units. Also show the total cost and unit cost for 5,000 units

Particulars	„A‟ Rs.	„B” Rs.
Material cost	25,000	(100% varying)
Labour cost	15,000	(100% varying)
Power	1,250	(80% varying)
Repairs and maintenance	2,000	(75% varying)
Stores	1,000	(100% varying)
Inspection	500	(20% varying)
Depreciation	10,000	(100% varying)
Administration overheads	5,000	(25% varying)
Selling overheads	3,000	(25% varying)
Total	62,750	

.(Answer: Total Cost at 4,000 units – Rs. 51,630; at 5,000 units – Rs. 62,750 and at 6,000 units – Rs. 73,870. Cost per unit is Rs.12.908; Rs.12.55 and Rs. 12.31 respectively.)

11. The expenses of budgeted production of 20,000 units in a factory are furnished below:

Particulars	Per unit (Rs.)
Materials	140
Labour	50
Variable overheads	40
Fixed overheads	20
Variable expenses (direct)	10
Selling expenses (10% fixed)	26
Distribution expenses (20% fixed)	14
Administrative expenses	10

Prepare a Flexible Budget for the production of 16,000 units and 12,000 units. Indicate cost per unit at both the levels.

(Answer: Cost per unit at 16,000 units – Rs.318.85; at 12,000 units – Rs.333.60)