MANAGEMENT ACCOUNTING

Code : 18K5CO10

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MANAGEMENT ACCOUNTING

SYLLABUS

SUBJECT : MANAGEMENT ACCOUNTING

SUBJECT CODE: 18K5CO10

UNIT – III : FUND FLOW STATEMENT

Meaning – Uses- Preparation of Fund Flow Statement- Cash Flow Statement – Meaning and Uses – Preparation of Cash Flow Statement (New Format According to AS3) – Fund Flow Statement Vs. Cash Flow Statement.

UNIT – IV : MARGINAL COSTING

Contribution – Key Factor – Break Even Analysis – Determination of Sales Mix – Make or Buy Decision- Capital Budeging.

UNIT – V : BUDGETS

Types – Budgetary Control – Objectives – Advantages – Functional Budgets – Fixed – Flexible Budget – Zero Base Budegeting.

(Theory 20 % Problem 80%)

TEXT BOOK:

Management Accounting – Dr.S.N.Maheswari

Management Accounting – R.S.N.Pillai & V. Bhagavathy

Management Accounting – Dr. Ramachandran & Dr. Srinivasan

FUND FLOW STATEMENT

MEANING OF FUND

The term “Fund” is commonly used with cash. Fund refers to the economic values expressed in terms of money listed in the balance sheet. It is also called net working capital.

Concept of Flow of Funds

The concept of flow of funds is also called as “fund flow”. The term flow means change and therefore the term ‘flow of fund’ means change in funds or change in working capital.

simply, flow of funds means any increase or decrease in working capital.

If the transaction results in the increase of funds it is called as a ‘source of funds’.

If the results in the decrease of funds it is known as an ‘application of funds’.

Concept of Flow of Funds(contd.)

The flow of funds occurs only when a transaction involves one current account and another non-current account. Example cash payment for purchase of building.

When a transaction involves non-current accounts only, no flow of fund occurs since working capital is not altered. Example, issue of shares for machinery.

Similarly, if a transaction affects current accounts only, no flow of funds occurs. Example, collection of cash from debtors or payment of cash to creditors.

Fund Flow Statement

It is popularly known as a " **Statement of Sources and Uses of Funds**". A fund flow statement is a statement which highlights the changes in the financial structure of a business unit.

Simply, it is a statement that shows how the funds are obtained and how it is put into use.

Objectives of Fund Flow Statement

The main objectives of fund flow statement are:

- To show how the resources have been obtained and used.
- To indicate the results of current financial management.
- To point out the most important changes that have taken place during a specified period.
- To have an assessment of the working capital position of the concern.
- To show the financial strengths and weakness of the business.

Significance of Fund Flow Statement

- Helps in knowing the sources and uses of fund.
- Suggests the ways to improve the working capital positions.
- Helps in assessing the efficiency of management in utilization of funds.
- Helps in planning investment of idle funds.
- Indicates the effectiveness of the management in handling and forecasting the working capital and long term requirements of a business.
- Reveals the cause for financial difficulties faced by the firm.
- It is used in giving needful information to banks for obtaining loans.

Uses or Advantages of Fund Flow Statement

It is an essential tool for financial analysis. It is being widely used by the financial institutions, financial mangers and analysts. The uses are:

- Analysis of Financial Operations
- Evaluation of the Firm's Financing
- Answers to Intricate Questions
- Allocation of scare Resources
- Helps in Working Capital Management
- Acts as a Guide to Future
- Helps Financial Institutions

Limitations of Fund Flow Statement

- It is not a substitute for an income statement or balance sheet. It only provides some additional information regarding changes in working capital.
- The information used is of historical in nature.
- It is not original but just a systematic re-arrangement of data.
- It cannot reveal continuous changes.

Steps Involved in the Preparation of Fund Flow Statement

The preparation of fund flow statement requires the following important steps:

1. Preparation of Schedule of Changes in Working Capital.
2. Preparation of Adjusted Profit and Loss Account.
3. Preparation of Funds From Operation
4. Preparation of Fund Flow Statement

FUNDS FLOW STATEMENT – II

Steps Involved in Preparation of Funds Flow Statement

1. Preparation of Schedule of changes in working capital.
2. Preparation of non – current account (Ledger Accounts)
3. Preparation of Funds From Operation (or) Adjusted Profit and Loss Account.
4. Preparation of Funds Flow Statement.

Principle for Working Capital

The following is the principle of preparation of working capital statement

Increase in Current Assets – Increases W.C

Decrease in Current assets – Decrease W.C

Increase In Current Liability – Decreases W.C

Decrease in Current Liability – Increases W.C

Step- 1 : SPECIMEN
Statement Of Changes in Working Capital

Particulars			WORKING CAPITAL	
	Previous year (Rs.)	Current year (Rs.)	Increase (Rs.)	Decrease (Rs.)
Current Assets: (C.A)				
Cash in hand & Bank	XXX	XXX	XXX	
Debtors	XXX	XXX		XXX
Bills Receivable	XXX	XXX		XXX
Accurued Income	XXX	XXX	XXX	
Prepaid Expenses	XXX	XXX	XXX	
Short term investment	XXX	XXX		XXX
Total Current Assets	XXX	XXX		
Current Liabilities (C.L)				
Sundry Creditors	XXX	XXX	XXX	
Bills Payable	XXX	XXX		XXX
Bank Over Draft	XXX	XXX	XXX	
Total Current Liabilities	XXX	XXX		
Working Capital (C.A – C.L)	XXX	XXX		
Increase/Decrease in W.C	XXX			XXX
	XXX	XXX	XXX	XXX

Step – 2
Preparation of Non-Current Assets

- The next step is to ascertainment of hidden information about sources and applications of funds. In order to ascertain the various sources and application of funds, analysis of non-current accounts is essential.
- If no additional information is given for non-current accounts, There is no need to prepare ledger accounts.
- In case, any additional information is given for non-current accounts, it is necessary to open an account for each non-current assets and non-current liabilities to dig out the hidden information as balancing figures.
- The balancing figures may be a sources of fund or an applications of funds or an item to be debited or credited to adjusted profit and loss account.

Step – 3
Statement of Funds From Operation

Particulars	Rs.	Rs.
Net profit for the Current		XXX
Add: Non –Fund or Non- operating Expenses:		
Goodwill Written off	XXX	
Proposed dividend	XXX	
Loss on Sale of Fixed Assets	XXX	
Depreciation	XXX	
Discount on Debentures written off	XXX	XXX
Provision for tax	XXX	
		XXX
Less: Fund or Non- operating Incomes:		
Previous year profit	XXX	
Profit on sale of fixed assets	XXX	
Income from investment	XXX	
Income tax refund	XXX	XXX
Funds From Operation/ Fund Lost in Operation		XXX

Step – 4
Fund Flow Statement

Sources of Funds	Rs.	Applications of Funds	Rs.
Issue of shares	XXX	Repayment of loan	XXX
Issue of debentures	XXX	Redemption of Shares	XXX
Sale of fixed assets	XXX	Redemption of Debentures	XXX
Loan borrowed from banks	XXX	Purchase of Fixed assets	XXX
Investment sold	XXX	Tax paid & Dividend paid	XXX
Funds from operation	XXX	Fund lost in operation	XXX
Decrease in working capital	XXX	Increase in working capital	XXX
	XXX		XXX

Sum – 1

1. From the following prepare a statement showing changes in working capital during1999

Balance sheet of Sree Ganesh Ltd., as on 31st December

Liabilities	1998(Rs.)	1999(Rs)	Assets	1998 (Rs)	1999 (Rs)
Share capital	6,00,000	6,00,000	Fixed Assets Less: Depreciation	10,00,000 3,70,000	11,20,000 4,60,000
Reserves	50,000	1,80,000		6,30,000	6,60,000
Profit & Loss A/C	40,000	65,000	Stock	2,40,000	3,70,000
Debentures	3,00,000	2,50,000	Book debts	2,50,000	2,30,000
Creditors	1,70,000	1,60,000	Cash in hand & Bank	80,000	60,000
Provision for income tax	60,000	80,000	Preliminary expenses	20,000	15,000
	12,20,000	13,35,000		12,20,000	13,35,000

Solution – 1

Statement of Schedule of Changes in Working Capital

Particulars	1998 (Rs.)	1999 (Rs.)	Working Capital	
			Increase	Decrease
Current Assets: (C.A)				
Stock	2,40,000	3,70,000	1,30,000	---
Book debts	2,50,000	2,30,000	---	20,000
Cash in hand & banks	80,000	60,000	---	20,000
Total Current Assets	5,70,000	6,60,000		
Less: Current Liabilities: (C.L)				
Creditors	1,70,000	1,60,000	10,000	---
Provision for tax	60,000	80,000	---	20,000
Total Current Liabilities	2,30,000	2,40,000	1,40,000	60,000
Working Capital (C.A – C.L)	3,40,000	4,20,000	---	---
Increase in working capital	80,000	---	---	80,000
	4,20,000	4,20,000	1,40,000	1,40,000

Sum – 2 :Fund from operation

A company's reported profit of Rs. 90,000 after incorporating the following, you are required to calculate the net inflow of fund from operation.

Particulars	(Rs.)
Profit on sale of non- current assets	50,000
Profit on revaluation of investment	3,000
Dividend income on investment	5,000
Loss on sale of equipment	11,000
Premium on redemption of debentures	2,000
Discount on issue of debentures	2,500
Depreciation on machinery	25,000
Depletion of natural resources	11,500
Amortization of goodwill	25,000
Interim dividend	12,500
Excess provision of taxation	21,000
Transfer General Reserve	6,000
Preliminary expenses written off	1,500

Solution – 2

Statement Showing Funds From Operation

Particulars	(Rs.)	(Rs.)
Net profit for the current year		90,000
Add: Non-Fund or Non-Operating Expenses:		
Loss on sale of equipment	11,000	
Discount on issue of dentures	2,500	
Depreciation on machinery	25,000	
Depletion of natural resources	11,500	
Amortization of goodwill	25,000	
Excess provision for taxation	21,000	
Transfer to General reserve	6,000	
Preliminary expenses written off	1,500	
Premium on redemption of debentures	2,000	
Interim dividend	12,500	1,18,000
		2,08,000
Less: Non-Fund or Non-Operating Incomes:		
Profit on sale of non-current assets	50,000	
Profit on revaluation of investments	3,000	
Dividend income on investments	5,000	58,000
Net Inflow of Fund From Operation		1,50,000

Sum – 3

Following are the information extracted from the balance sheet of Charles David Co. Ltd., you are required to compute fund from operation.

Particulars	As on 31st Dec. 1997 Rs.	As on 31st Dec. 1998 Rs.
Profit & Loss Appropriation account	90,000	2,20,000
General Reserve	60,000	75,000
Goodwill	30,000	15,000
Preliminary expenses	18,000	12,000
Provision of depreciation on machinery	30,000	36,000

Solution – 3

Statement Showing Funds From Operation

Particulars	Rs.	Rs.
Profit & Loss Appropriation Account Balance as on 31-12-2008		2,20,000
Add: Non – Fund Expenses:		
Transfer to General Reserve	15,000	
Goodwill written off	15,000	
Preliminary expenses written off	6,000	
Depreciation on machinery	6,000	42,000
		2,62,000
Less: Non – Fund Incomes:		
Profit & Loss Appropriation Account Balance as on 31-12-2007		90,000
Fund From Operation		1,72,000

Sum-4 (FFS without adjustment)

From the following balance sheet of Sun Co. Ltd., as on 31st Dec. 1997 and as on 31st Dec.1998, prepare (i) A schedule of changes in working capital and (ii) Fund flow statement.

Liabilities	31.12.97	31.12.98	Assets	31.12.97	31.12.98
Equity share capital	3,00,000	4,00,000	Furniture (at cost) Less: Depreciation	1,00,000 56,000	1,20,000 68,000
Share premium	---	10,000		44,000	52,000
General Reserve	1,00,000	1,20,000	Goodwill	20,000	16,000
Profit & loss A/C	40,000	70,000	Long term investment	80,000	1,04,000
Debentures	2,00,000	1,50,000	Stock	5,08,000	5,78,000
Bills payable	50,000	40,000	Debtors	62,000	56,000
Trade creditors	70,000	80,000	Cash at bank	44,000	62,000
Outstanding expenses	4,000	2,000	Discount on debentures	6,000	4,000
	7,64,000	**8,72,000**		**7,64,000**	**8,72,000**

Solution – 4

Statement of Schedule of Changes in Working Capital

Particulars	1997 (Rs.)	1998 (Rs.)	WORKING CAPITAL	
			Increase Rs.	Decrease Rs.
Current assets: (C.A)				
Stock	5,08,000	5,78,000	70,000	----
Debtors	62,000	56,000	---	6,000
Cash at hand	44,000	62,000	18,000	---
Total current assets	6,14,000	6,96,000		
Less: Current Liabilities: (C.L)				
Bills payable	50,000	40,000	10,000	---
Trade creditors	70,000	80,000	---	10,000
Outstanding expenses	4,000	2,000	2,000	---
Total current liabilities	1,24,000	1,20,000	1,00,000	16,000
Working Capital (C.A–C.L)	4,90,000	5,74,000		
Increase in working capital	84,000	---	---	84,000
	5,74,000	5,74,000	1,00,000	1,00,000

Solution – 4 (contd.)

Calculation of Funds From Operation

Particulars	Rs.	Rs.
Current year profit		70,000
Add: Non – Fund Expenses:		
Depreciation	12,000	
Discount on debentures	2,000	
Goodwill written off	4,000	
Transfer to General reserve	20,000	38,000
		1,08,000
Less: Non- Fund Incomes:		
Previous year profit		40,000
Funds From Operation		68,000

Solution – 4 (contd.)

Funds Flow Statement

Sources of Funds	Rs.	Application of Funds	Rs.
Issue of shares	1,00,000	Purchase of furniture	20,000
Increase in share premium	10,000	Purchase of investment	24,000
Fund from operation	68,000	Redemption of debentures	50,000
		Increase in working capital	84,000
	1,78,000		1,78,000

Sum – 5

From the following information, calculate funds from operation for the second year.

Particulars	I year	II year
Profit and Loss account	25,000	40,000
General reserve	40,000	45,000
Goodwill	7,000	4,000
Preliminary expenses	5,000	3,000
Provision for depreciation on machinery	10,000	12,000

Solution – 5

Fund From Operation

Particulars	Rs.	Rs.
Current year profit	---	40,000
Add: Non – Fund Expenses:		
Transfer to General Reserve	5,000	
Goodwill written off	3,000	
Preliminary expenses written off	2,000	
Provision for Depreciation	2,000	12,000
		52,000
Less: Non – Fund Incomes:		
Previous year profit		25,000
Funds From Operation		57,000

Sum – 6

6. From the following information relating to the Bright Ltd., calculate funds lost in operation.

- Net loss for the year – Rs.40,000
- Dividend received – Rs.7,000
- Depreciation charged – Rs. 10,000
- Profit on sale of assets – Rs. 5,000
- Refund of tax –Rs. 2,000

Solution – 6

Particulars	Rs.	Rs.
Net loss for the year	---	90,000
Add: Non – Fund or Non– Operating Incomes: Profit on sale of assets Refund of tax Dividend received	 5,000 2,000 7,000	 14,000
		1,04,000
Less: Non – Fund or Non– operating Expenses: Depreciation charged		10,000
Fund Lost In Operation		94,000

Sum – 7(with simple adjustment)

The balance sheet of Moon Limited for the year ended 31st December 1998 and 1999 are as follows:

Liabilities	1998	1999	Assets	1998	1999
Share capital	80,000	1,20,000	Freehold Premises	55,400	1,13,200
Share premium	8,000	12,000	Plant & Machinery	35,600	51,300
General reserve	6,000	9,000	Furniture & fixtures	2,400	1,500
Profit & Loss account	19,500	20,800	Stock	22,100	26,000
5% Debentures	---	26,000	Debtors	36,500	39,100
Income tax provision	9,800	10,900	Bank	4,800	4,000
creditors	33,500	36,400			
	1,56,000	2,35,100			
	1,56,000	2,35,100		1,56,000	2,35,100

Depreciation written off during the year 1999 was as under:
Plant & Machinery – Rs.12,800 ; Furniture & Fixtures – Rs. 400
Prepare a statement of sources and uses of funds.

Solution – 7

Statement of Schedule of Changes in Working

Particulars	1998 (Rs.)	1999 (Rs.)	WORKING CAPITAL	
			Increase (Rs.)	Decrease (Rs.)
Current Assets: (C.A)				
Stock	22,100	26,000	3,900	---
Debtors	36,500	39,100	2,600	---
Bank Balance	4,800	4,000	---	800
Total Current Assets	63,400	69,100		
Current Liabilities : (C.L)				
Creditors	33,500	36,400	---	2,900
Income tax provision	9,800	10,900	---	1,100
Total Current Liabilities	43,300	47,300		
Working Capital (C.A – C.L)	20,100	21,800	6,500	4,800
Increase in working capital	1,700	---	---	1,700
	21,800	21,800	6,500	6,500

Solution – 7 (contd.)

Plant & Machinery Account

	Rs.		Rs.
To Balance b/d	35,600	By Adjusted P & L A/C (Depreciation)	12,800
To Cash (Purchase) (Balancing Figure)	28,500	By Balance c/d	51,300
	64,100		64,100

Furniture & Fixtures Account

	Rs.		Rs.
To Balance b/d	2,400	By Adjusted P&L A/c (Depreciation)	400
		By Cash (Sale) (b/f)	500
		By Balance c/d	1500
	2,400		2,400

Solution – 7 (contd.)

Calculation of Funds from Operation

Particulars	Amount (Rs.)	Amount (Rs.)
Current Year Profit		20,800
Add: Non Fund (or) Non operating Expenses:		
Depreciation of Plant & Machinery	12,800	
Depreciation of Furnitue & Fixtures	400	
Transfer to General reserve	3,000	16,200
		37,000
Less: Non Fund (or) Non operating Income:		
Previous Year P & L A/c		19,500
Funds From Operation		17,500

Solution – 7 (contd.)

Funds Flow Statement

Sources of Funds	Amount (Rs.)	Applications of Funds	Amount (Rs.)
Issue of Shares	40,000	Purchase of freehold furnishes	57,800
Share Premium	4,000	Purchase of Plant & Machinery	28,500
Issue of Debentures	26,000	Increase in working capital	1,700
Sale of Furniture & Fixtures	500		
Funds from Operation	17,500		
	88,000		88,000

Sum – 8(with simple adjustment)

7. From the following balance sheet of XYZ Ltd., prepare funds flow statement.

Liabilities	1999	1998	Assets	1999	1998
Creditors	1,80,000	1,25,000	Cash	50,000	40,000
5% Debentures	1,00,000	2,00,000	Debtors	30,000	15,000
Share capital	2,00,000	1,00,000	Stock	1,00,000	80,000
Profit & loss a/c	20,000	---	Short term investment	1,20,000	50,000
			Fixed Assets	2,00,000	2,00,000
			Profit & Loss a/c	---	40,000
	5,00,000	4,25,000		5,00,000	4,25,000

Provision for depreciation on the last day of 1998 was Rs.50,000. The same on the last day of 1999 was Rs. 60,000.
During the year 1999, a machine costingRs.30,000(depreciation Rs.10,000) was sold for Rs. 16,000.

Solution – 8

Statement of Schedule of Changes in Working Capital

Particulars	1998 (Rs.)	1999 (Rs.)	WORKING CAPITAL	
			Increase (Rs.)	Decrease (Rs.)
Current Assets: (C.A)				
Cash	40,000	50,000	10,000	---
Debtors	15,000	30,000	15,000	---
stock	80,000	1,00,000	20,000	---
Short term investment	50,000	1,20,000	70,000	---
Total Current Assets	**1,85,000**	**3,00,000**		
Current Liabilities : (C.L)				
Creditors	1,25,000	1,80,000	---	55,000
Total Current Liabilities	1,25,000	1,80,000		
Working Capital (C.A – C.L)	60,000	1,20,000	1,15,000	55,000
Increase in working capital	**60,000**	**---**	**---**	**60,000**
	1,20,000	**1,20,000**	**1,15,000**	**1,15,000**

Solution – 8 (contd.)

Fixed Assets Account

	Rs.		Rs.
To Balance b/d	2,50,000	By Cash	16,000
To Cash (Purchase)	40,000	By Provision for Dep.	10,000
(Balancing Figure)		By Adjusted P & L A/C (loss on sale)	4,000
		By Balance c/d	2,60,000
	2,90,000		2,90,000

Provision For Depreciation Account

	Rs.		Rs.
To Fixed Assets	10,000	By Balance b/d	50,000
To Balance c/d	60,000	By Adjusted P&L A/c (Depreciation)	20,000
	70,000		70,000

Solution – 8 (contd.)

Calculation of Funds from Operation

Particulars	Amount (Rs.)	Amount (Rs.)
Current Year Profit		20,000
Add: Non Fund (or) Non operating Expenses:		
provision for Depreciation	20,,000	
Loss on sale of Fixed assets	4,000	
Previous Year P & L A/c (loss)	40,000	64,000
Less: Non Fund (or) Non operating Incomes:		

Funds From Operation		84,000

Solution – 8 (contd.)

Funds Flow Statement

Sources of Funds	Amount (Rs.)	Applications of Funds	Amount (Rs.)
Issue of Shares	1,00,000	Redemption of Debenture	1,00,000
Sale of machine	16,000	Purchase of fixed Assets	40,000
Funds from Operation	84,000	Increase in working capital	60,000
	2,00,000		2,00,000

UNIT – III

CASH FLOW STATEMENT

Cash Flow Statement
As per AS- 3

Introduction of Cash Flow Statement:

A statement prepared from the historical data showing sources and uses of cash is called cash flow statement. It reveals the inflow and outflow of cash during the particular period. It can be prepared for a year, half year, quarter or for any other duration. The term cash is used to refer bank balance also.

Meaning of cash and cash flows

- Cash includes cash in hand, bank balance and demand deposits with banks. Cash equivalents refers to highly liquid short term investments such as treasury bills and commercial papers.
- Cash flows refers to inflows and outflows of cash or cash equivalent.
- Net cash inflow is the difference between the cash inflows and cash outflows. It may be net cash inflow or net cash outflow.

Meaning of Cash Flow Statement

- Cash flow statement is a statement which shows the inflow and outflow of cash (cash equivalent like bank balance, temporary investment) in a firm during a particular period, usually one year.
- It indicates the causes for changes in cash between two balance sheet dates.
- The traditional CFS is prepared, taking the opening cash balance as the starting point.
- Cash inflows and outflows are recorded as separate items.
- The resulting figure is the closing balance of cash.
- No specific format is prescribed for the traditional cash flow statement.

Accounting Standard – 3: CFS

The institute of Charted Accountants of India had issued Accounting Standard 3 (AS3): cash flow statement . As per revised AS 3, cash flows are classified and reported under three heads.

1. **Cash Flow from Operating Activities**:

   These are net cash flows generated or used in the business operation of the firm.

2. **Cash Flow from Investing Activities**:

   These are cash flows from transactions such as sale of assets, purchase of assets, sale of investment, purchase of investment, receipts of dividend and interest.

3. **Cash Flow from Financing Activities**:

   These are cash flows caused by issue of shares and other securities, raising of long-term loans, repayment of long-term loans, payment of dividends etc.

The cash flow statement shows the net cash inflow or outflow from each group of activities. It shows the reasons for changes in cash balances during the period.

The revised AS3 is mandatory for all listed companies and other firms with an annual turnover of more than Rs.50 crores.

Objectives of Cash Flow Analysis

- To provide information about the cash flows of an enterprise, for assessing its ability to generate and utilize cash flows.
- To enable the users of financial statements to evaluate the timing and certainty of cash flows.
- To classify the cash flows on the basis of operating, investing and financing activities.

Uses of Cash Flow Statement

- It explain the reasons for low cash balance inspite of huge profits or large cash balance inspite of low profits.
- It helps in short term financial decisions relating to liquidity.
- It shows the major sources and uses of cash.
- It helps the management in planning the repayment of loans, replacement of assets, credit arrangements etc.
- On the basis of past years' cash flow statement projections can be made for the future.
- A comparison of actual cash flow statement with projected cash flow statement helps in understanding the variations and control of cash expenditure.

Differences Between Cash Flow Statement and Funds Flow Statement

The changes of financial position of a firm can be analysed by either FFS or CFS. The following are the differences between two approaches;

1. **Basis of preparation:**

   Fund flow analysis is based on the working capital concept of 'funds'. Cash flow analysis is based on the cash concept of funds.

2. **Basis of Accounting:**

FFS is based on ‘accrual concept’ or accrual basis of accounting. Cash flow analysis is based on cash basis of accounting.

3. **Changes Shown:**

FFS shows the various causes for changes in the working capital position over a period of time. But cash flow analysis reveals the causes for change in the cash position over the same accounting period.

4. **Usefulness**:

FFS is more useful for decision making in the long run. Cash flow analysis is more useful in the short run. It is useful tool for short term financial decisions.

5. **Short term solvency**:

FFS is a better indicator for short term solvency because it considers all the C.A and C.L. But Cash flow statement cannot clearly reveal the short term solvency position of firm because it considers only cash and ignore all other C.A and C.L.

6. **Inter Dependence**:

Working capital includes cash also. Thus, improvement in cash position automatically improves working capital also. But the reverse is not always true. Working capital may increase even if cash decreases.

7. **Preparation of Budget**:

FF analysis is an important tool for the preparation of capital expenditure budget particularly for medium term. While, CF analysis is very useful to make the short term estimates of cash.

8. **Differences on the preparation :**

CFS starts with opening cash and bank balances and ends with closing cash and bank balances. There are no balances in the preparation of FFS.

Funds from operations are calculated and shown in FFS. The funds from operations are further adjusted to ascertain cash from operations and shown in cash flow statement.

Increase in C.A and decrease in C.L increase the Working capital and vice versa. On the other hand , increase in C.A and decrease in C.L actually decrease the cash.

Format Of Cash Flow Statement Approved by SEBI

Cash Flow Statement for the year ended ...

Particulars	Rs.	Rs.
A. CASH FLOW FROM OPERATING ACTIVITIES:		
Net profit before tax and extraordinary items		XXX
Adjustments for:		
Depreciation	XXX	
Gain/Loss on sale of fixed assets	XXX	
Foreign exchange	XXX	
Miscellaneous expenditure written off	XXX	
Investment income	XXX	
Interest	XXX	
Dividend	XXX	XXX
Operating profit before working capital changes:		
Adjustments for:		
Trade and other receivables	XXX	
Inventories	XXX	
Trade payables	XXX	XXX
Cash Generated From operations		
Interest paid	XXX	
Direct taxes paid	XXX	
Cash flow before extraordinary items	XXX	XXX
Net Cash From Operating Activities		XXX

Format of CFS (contd.)

Cash Flow Statement for the year ended ...

Particulars	Rs.	Rs.
B. CASH FLOW FROM INVESTING ACTIVITIES:		
Purchase of fixed assets	XXX	
Sale of fixed assets	XXX	
Purchase of investment	XXX	
Sales of investment	XXX	
Interest received	XXX	
Dividend received	XXX	XXX
Net Cash From Investing Activities		XXX
C. CASH FLOW FROM FINANCING ACTIVITIES:		
Proceeds from issue of share capital	XXX	
Proceeds from long term borrowings/banks	XXX	
Payment of long term borrowings	XXX	
Dividend paid	XXX	XXX
Net Cash From/Used In Financing Activities		XXX
Net increase / decrease in cash (A+B+C)		XXX
Add: Cash and Equivalent as at (Opening Balance)		XXX
Cash and Equivalent as at (Closing Balance)		XXX

Sums in Cash Flow Statement

From the balance sheets as on 31st March 2007 and 31st March 2008, prepare cash flow statement.

Liabilities	31.3.07	31.3.08	Assets	31.3.07	31.3.08
Share capital	100000	150000	Fixed assets	100000	150000
P&L account	80000	120000	Goodwill	50000	40000
10% Debentures	50000	60000	Stock	30000	70000
Creditors	30000	40000	Debtors	50000	90000
Outstanding Expenses	10000	15000	Bills receivable	30000	20000
			Bank	10000	15000
	2,70,000	3,85,000		2,70,000	3,85,000

Cash Flow Statement
As per AS-3 Revised Method

particulars	Rs.	Rs.
A. Cash Flows From Operating Activities:		
Net profit before tax	40,000	
Add: Goodwill written off	10,000	
Cash operating profit	50,000	
Working Capital Changes:		
Increase in creditors(inflow)	10,000	
Increase in outstanding expenses(inflow)	5,000	
Decrease in bills receivable (inflow)	10,000	
Increase in stock (outflow)	(40,000)	
Increase in debtors (outflow)	(40,000)	
Net cash used in operating activities		(5,000)
B. Cash Flows From Investing Activities:		
Purchase of fixed assets (outflow)	(50,000)	
Net cash used in investing activities		(50,000)
C. Cash Flows From Financing Activities:		
Issue of shares (inflow)	50,000	
Issue of debentures (inflow)	10,000	
Net cash from financing activities		60,000
Net Increase in cash & cash equivalent		5,000
Cash and Cash equivalent at the beginning		10,000
Cash and Cash equivalent at the end		15,000

2.The comparative balance sheet of M/s. Ram Brothers for the two years were as follows:

Liabilities	2007	2008	Assets	2007	2008
Capital	150000	175000	Land & building	110000	150000
Loan from bank	160000	100000	Machinery	200000	140000
Creditors	90000	100000	Stock	50000	45000
Bills payable	50000	40000	Debtors	70000	80000
Loan from SBI	---	25000	Cash	20000	25000
	450000	440000		450000	440000

Additional information:

(i) Net profit for the year 2008 amounted to Rs. 60,000

(ii) During the year a machine costing Rs.25,000 (accumulated depreciation Rs. 10,000) was sold for Rs.13,000.

The provision for depreciation against machinery as on 31.12.2007 was Rs. 50,000 and on 31.12.2008, Rs. 85,000.

You are required to prepare a cash flow statement.

Cash Flow Statement

Particulars	Rs.	Rs.
I. Cash Flows From Operating Activities: Net profit before tax Add: Loss on sale of machinery Provision for depreciation during the year	 60,000 2,000 45,000	
Cash operating profit	1,07,000	
Working capital charges: Increase in creditors(inflow) Decrease in stock (inflow) Increase in debtors (outflow) Decrease in bills payable (outflow)	 10,000 5,000 (10,000) (10,000)	
Net cash from operating activities		1.02,000
II. Cash Flows From Investing Activities: Sale of machinery (inflow) Purchase of land & building(outflow)	 13,000 (40,000)	
Net cash used in investing activities		(27,000)
III. Cash Flows from Financing Activities: Loan from SBI (inflow) Repayment of loan (outflow) Drawings (outflow)	 25,000 (60,000) (35,000)	
Net cash used in financing activities		(70,000)
Net increase in cash and cash equivalent Cash & cash equivalents at the beginning **Cash & cash equivalents at the end**		5,000 20,000 25,000

Working Notes:

Machinery Account

Particulars	Rs.	Particulars	Rs.
To Balance b/d (2,00,000+ 50,000)	2,50,000	By Cash	13,000
		By P & L account (loss on Sale)	2,000
		By provision for Dep.	10,000
		By Balance c/d (1,40,000+85,000)	2,25,000
	2,50,000		2,50,000

Provision for Depreciation Account

To Machinery a/c (Dep.on machine sold)	10,000	By Balance b/d	50,000
To Balance c/d	85,000	By P & L account (provision made)	45,000
	95,000		95,000

Capital Account

To Drawings (B/F)	35,000	By Balance b/d	1,50,000
To Balance c/d	1,75,000	By Net Profit	60,000
	2,10,000		2,10,000

UNIT – IV

MARGINAL COSTING

MARGINAL COSTING

Introduction

Marginal costing is a technique of costing fully oriented towards managerial decision making and control. It guides the management in pricing, decision making and assessment of profitability. It reveals the inter-relationship between cost, volume of sales and profit.

MARGINAL COST

- The term ‘marginal cost’ is derived from the word ‘margin’, is a well known concept of economics theory.
- From the economist’s point of view, cost incurred in producing an additional unit of a product is termed as marginal cost.
- From accountant’s point of view, marginal cost applies to the total cost obtained by adding prime cost and variable cost. Simply, all costs other than fixed costs are the marginal cost.

Meaning of Marginal Costing

Marginal cost is the additional cost of producing an additional unit of a product. It classifies costs into fixed and variable and variable cost are charged to products. It does not include fixed expenses. Marginal costing is also known as "direct costing or variable costing or incremental costing".

Example : Marginal cost is the difference in cost of producing one additional unit.

If the cost of producing 10units is Rs.1000 and the total cost of producing 11units is Rs.1080, then the marginal cost of the 11^{th} unit is 80.

"Thus, the marginal cost is variable cost"

.

Definition of Marginal costing

According to ICMA, London, " marginal costing is the amount, at any given volume of output, by which aggregate costs are changed, if the volume of output is increased or decreased by one unit"

For a typical manufacturing company the following elements of costs are variable or marginal costs:

Direct Material

Direct Wages

Direct Expenses

Variable Overheads

Features of Marginal Costing

- All costs are classified into two – fixed and variable.
- Only the variable costs (marginal costs) are treated as the cost of the product.
- The stock of finished goods and work-in-progress are valued at marginal cost only.
- Fixed costs are charged against the contribution earned during the period.
- Prices are based on marginal cost plus contribution. Contribution is the difference between selling price and variable cost.

BREAK -EVEN ANALYSIS

(COST-VOLUME-PROFIT ANALYSIS)

- The study of cost-volume-profit relationship is often referred as BEA. The term BEA is interpreted in two senses.
- In the narrow sense, it is concerned with finding out the BEP. BEP is the point at which total revenue is equal to total cost. Simply it is the point of no profit no loss.
- In the broad sense, it means a system of analysis that can be used to determine the probable profit at any level of production.

ASSUMPTIONS OF BEA

- All costs are classified into two – fixed and variable.
- Fixed cost remain constant at all levels of output.
- Variable costs vary proportionally with the volume of output.
- There will be no change in operating efficiency.

Marginal Cost Statement

Marginal Cost Statement

Particulars	Amount (Rs.)	Amount (Rs.)
Sales	--	XXX
LESS: Marginal Cost:		
Direct Material	XXX	
Direct Wages	XXX	
Direct Expenses	XXX	
Variable Overheads	XXX	XXX
CONTRIBUTION		XXX
LESS: Fixed Cost		XXX
PROFIT		XXX

SOME IMPORTANT CONCEPT /TERMS OF BEA OR CVP

FIXED COSTS

It represents those expenses, which do not vary in total with change in volume of output for a given period of time. Example of such expenses are, office rent, factory rent, manager's salary, etc.

VARIABLE COSTS

It represents those expenses, which increase or decrease in proportion to the output and sales. Example of such expenses are, raw material, power, commission paid to salesmen etc.

(contd.)

CONTRIBUTION

- The excess of selling price over and above the variable cost is known as contribution. It is also known as contribution margin or gross margin or profit pick up. Example : If the selling price per unit of a product is Rs.20, and the variable cost is Rs.12, then the contribution margin is Rs. 8(20-12).
- In marginal costing, it is a very important concept as it is used to ascertain the profitability of products,processes and division.

(contd.)

Profit Volume Ratio (P/V Ratio)

- It is usually called P/V ratio.
- The ratio contribution to sales is the profit volume ratio.
- It may be expressed in percentage.
- Therefore, every organization tries to improve the p/v ratio by reducing the variable cost or by increasing the selling price per unit.
- The concept of p/v ratio helps in determining break-even point, profit at any volume of sales, sales volume required to earn a desired amount of profit etc.
- $\text{P/V Ratio} = \frac{\text{Contribution}}{\text{Sales}} \times 100$

(Or) $\text{P/V Ratio} = \frac{\text{Changes in profit}}{\text{Changes in Sales}}$

Break – Even Point

If we divide the term into three words,

Break – Divide

Even – Equal

Point – Place or position. That means the point where the total cost is equal to total revenue.

It is a point of no profit, no loss.

This is also a minimum point of production where total costs are recovered.

If sales go up beyond the break even point, the organization makes a profit. If they come down, loss is incurred.

(contd.)

1. Break Even Point (in units)

$$= \frac{\text{Fixed Expenses}}{\text{Contribution per unit}}$$

2. Break Even Point (in Rupees)

$$= \frac{\text{Fixed Expenses}}{\text{Contribution}}$$

Margin Of Safety

Margin of safety is the excess of sales over the break even sales. It can be expressed in absolute sales amount or in percentage. Margin of safety indicates the soundness of the business. The formula for margin of safety is:

Margin of Safety = Present Sales – BE sales

(OR)

$$\text{Margin of Safety} = \frac{\text{Profit}}{\text{P.V. Ratio}}$$

MARGINAL COST – FORMULAE

1. contribution = sales – variable cost
2. P/V Ratio = $\frac{\text{Contribution}}{\text{Sales}} \times 100$
3. BEP(in Unit) = $\frac{\text{Fixed Expenses}}{\text{Contribution per unit}}$
4. BEP(in Rs.) = $\frac{\text{Fixed Expenses}}{\text{Contribution}} \times \text{Sales}$
5. Margin of Safety = Actual sales – Break Even Sales

Sum – 1

Calculate Break Even Point from the following particulars.

Fixed expenses – Rs. 1,50,000

Variable cost per unit – Rs. 10

Selling price per unit – Rs. 15

Solution:

$$\text{BEP (in units)} = \frac{\text{Fixed Expenses}}{\text{Contribution per unit}}$$

Sum – 1 (contd.)

Contribution = Sales – Variable Cost

= 15– 10

= Rs.5

BEP (in units) = $\frac{\text{Fixed Expenses}}{\text{Contribution per unit}}$

= $\frac{\text{Rs.1,50,000}}{5}$

= 30,000 units.

BEP (in Rupees) = BEP units X Selling Price per unit

= 30,000X Rs. 15

= Rs. 4,50,000.

Sum – 2

- Calculate break-even point :

  Rs.
- Sales
  6,00,000
- Fixed expenses 1,50,000
- Variable costs:
- Direct material 2,00,000
- Direct labour
  1,20,000
- Other variable expenses 80,000

Solution for sum -2

Break Even Point = $\frac{\text{Fixed Expenses}}{\text{Contribution}}$ X Sales

Contribution = Sales – Variable cost

= Rs. 6,00,000– Rs. 4,00,000

= Rs. 2,00,000

B.E.P (in Rs.) = $\frac{1,50,000}{2,00,000}$ X 6,00,000

B.E.P (in Rs.) = Rs. 4,50,000

Sum – 3

- The following informations are given for two companies.

	X Ltd.	Y Ltd.
Units produced & sold	17,000	17,000
Revenues	1,70,000	1,70,000
Fixed costs	85,000	34,000
Operating income	51,000	51,000
Variable cost	34,000	85,000

- Find out the Break-Even point of each company both in units as well as in volume.

Solution for sum -3

Particulars	X Ltd.	Y Ltd.
Sales	1,70,000	1,70,000
Less: Variable Cost	34,000	85,000
CONTRIBUTION	1,36,000	85,000
Less: Fixed Expenses	85,000	34,000
PROFIT (Operating)	51,000	51,000

Break Even Point = $\frac{\text{Fixed Expenses}}{\text{Contribution}}$ X Sales

X Ltd. = $\frac{85,000}{1,36,000}$ X 1,70,000

= Rs. 1,06,000.

Y Ltd. = $\frac{34,000}{85,000}$ X 1,70,000

= Rs. 68,000

Selling Price per unit = $\frac{1,70,000}{17,000}$

= Rs.10

BEP (in Units) = $\frac{1,06,000}{10}$

BEP (in Units) = 68,000/10 =6800 Unit

10,625Units

Sum – 4

- The following information relating to a company is given to you.

	Rs.
Sales	4,00,000
Fixed cost	1,80,000
Variable cost	2,50,000

- Ascertain how much the values of sales must be increased for the company to Break-even

Solution for sum -4

Break Even Point(Rs.) = $\frac{\text{Fixed Expenses}}{\text{Contribution}}$ X Sales

Contribution = Sales – Variable cost

= Rs.4,00,000 – Rs. 2,50,000

= Rs.150,000

BEP (in Rs) = $\frac{1,80,000}{1,50,000}$ X 4,00,000

= Rs. 4,80,000

BEP Sales = Rs. 4,80,000,

Present Sales = Rs. 4,00,000

Therefore, Sales are to be increased by Rs.80,000 to reach Break Even Sales.

Sum – 5

- From the following data ,calculate Break-even point expressed in terms of units and also the new B.E.P. if selling price is reduced by 10%
- Fixed expenses:
- Depreciation Rs.1,00,000
- Salaries Rs.1,00,000
- Variable expenses:
- Materials Rs. 3 per unit
- Labour Rs. 2 per unit
- Selling price Rs. 10 per unit

Solution for sum -5

(i) Calculation of BEP (in units) = Fixed Expenses / Contribution per unit

Contribution = Sales – Variable Cost

= Rs.10 – Rs. 5 = Rs. 5

BEP (in Units) = 2,00,000/ 5 = 40,000 units

(ii) When Selling price is reduced by 10%

New selling Price = Rs 9 (Rs.10 – Re. 1)

Contribution = Sales – Variable Cost

= 9 – 5

New contribution = 4

New Break Even Point (in units) = 2,00,000/4 = 50,000 units.

Sum – 6

From the following data calculate;

(i) Numbers of units to be sold to earn a profit of Rs.1,20,000.

(ii) Sales to earn a profit of Rs. 1,20,000.

Selling price per unit Rs.40

Variable selling cost per unit Rs.3

Variable manufacturing cost per unit Rs.22

Fixed factory overhead Rs.1,60,000

Fixed Selling cost Rs.20,000

Solution for sum -6

(i) Numbers of units to be sold to earn a profit of Rs. 1,20,000:

$$\text{BEP (in units)} = \frac{\text{Fixed Expenses + Desired profit}}{\text{Contribution per unit}}$$

Contribution = Sales – Variable Cost

=40 – (3+22)

= 40 – 25 = Rs. 15.

Fixed Expenses = 1,60,000+20,000 = Rs. 1,80,000

$$\text{BEP (in units)} = \frac{1,80,000 + 1,20,000}{15}$$

= 3,00,000/15 = 20,000 Units.

Solution for sum -6 (contd.)

(ii) Sales to earn a profit of Rs. 1,20,000:

BEP (in Rs.)

$$= \frac{\text{Fixed Expenses + Desired profit}}{\text{p.u}} \times \text{Selling Price}$$

$$= \frac{1,80,000 + 1,20,000}{\text{Contribution per unit}} \times 40$$

$$= \frac{3,00,000}{15} \times 40$$

= Rs. 8,00,000

Sales to earn a profit of Rs. 1,20,000 = Rs.8,00,000

Sum – 7

From the following information relating to Quick Standards Ltd., you are required to find out (a) P.V.Ratio (b) Break Even point (c) Profit (d) Margin of Safety.

Total Fixed Cost Rs. 4,500

Total Variable Cost Rs.7,500

Total Sales Rs.15,000

(e) Also calculate the volume of sales to earn profit of Rs.6,000.

Solution for sum -7

(a) Profit Volume Ratio:

$$\text{P.V.Ratio} = \frac{\text{Contribution}}{\text{Sales}} \times 100$$

Contribution = Sales – variable cost

= 15,000 – 7,500

= 7,500

$$\text{P.V.Ratio} = \frac{7,500}{15,000} \times 100$$

P.v.Ratio = 50%

Solution for sum -7 (contd.)

(b)Break Even Point = $\frac{\text{Fixed Expenses}}{\text{P.V. Ratio}}$

$= \frac{4,500}{50} \times 100$

$=$Rs. 9,000

(c) Profit = Contribution – Fixed expenses

= 7,500 – 4,500 =Rs. 3,000

Alternatively, Profit= Sales – total cost

= 15,000 -12,000

= Rs. 3,000.

Solution for sum –7 (contd.)

(d) Margin of Safety = Present Sales – Break Even Sales

= Rs. 15,000 – 9,000 = Rs.6,000

Margin of Safety = Rs.6,000

Alternatively, (Or) = $\frac{\text{Profit}}{\text{P.V. Ratio}}$

$= \frac{3,000}{50} \times 100$

= Rs. 6,000

(e) Sales required to earn a profit of Rs. 6,000

$= \frac{\text{Fixed Expenses + Desired Profit}}{\text{P.V.Ratio}}$

$= \frac{4,500 + 6,000}{50} \times 100$

= Rs. 21,000

Sum – 8

Assuming that the cost structure and selling price remain the same periods I and II find out:

i) P/V Ratio

ii) B.E. Sales

iii) Profit when sales are Rs.1,00,000

iv) Sales required to earn a profit of Rs.20,000

v) Margin of safety in IInd Period.

Period	Sales (Rs.)	Profit (Rs.)
I	1,20,000	9,000
II	1,40,000	13,000

Solution for sum -8

i) P/V Ratio :

$$= \frac{\text{Contribution}}{\text{Sales}} \times 100$$

(OR)

$$= \frac{\text{Changes in Profit}}{\text{Changes in Sales}} \times 100$$

$$= \frac{13,000 - 9,000}{1,40,000 - 1,20,000} \times 100$$

$$= \frac{4,000}{20,000} \times 100$$

$$= 20\%$$

P/V Ratio = 20%

Solution for sum -8 (contd.)

ii) Break Even Sales :

To calculate break even sales, it is necessary to calculate fixed expenses.

Contribution = Sales X P.V Ratio

= 1,20,000 X 20/100

= Rs. 24,000

Contribution = Rs.24,000

Contribution = Fixed Expenses + Profit

24,000 = F.Exp. + 9,000

Fixed Expenses = 24,000 – 9,000

= 15,000

Therefore, Fixed Expenses = RS.15,000

Solution for sum -8 (contd.)

B.E Sales = $\frac{\text{Fixed Expenses}}{\text{P/V Ratio}}$

$= \frac{15,000}{20} \times 100$

= Rs. 75,000.

B.E Sales = RS. 75,000.

iii) Profit when sales are Rs. 1,00,000:

Contribution = Sales X P/V Ratio

= 1,00,000 X 20/100 = Rs. 20,000

Contribution	=	20,000
Less: Fixed exp.	=	15,000
Profit	=	5,000

Profit =Rs. 5,000

Solution for sum -8 (contd.)

iv) Sales required to earn a profit of RS. 20,000:

$$= \frac{\text{Fixed Expenses + Desired Pr0fit}}{\text{P/V Ratio}}$$

$$= \frac{15{,}000 + 20{,}000}{20\%}$$

$$= \frac{35{,}000}{20} \times 100 = \text{Rs. } 1{,}75{,}000$$

Sales required to earn a profit of Rs. 20,000 = RS. 1,75,000

v) Margin 0f Safety in II Period:

= Profit / P.V.Ratio

= 13,000 X 100/20 = Rs. 65,000

Margin of Safety = Rs. 65,000

Sum – 9

A ball pen manufacturer has developed a new ball pen with unique features. His design development executive has suggested three possible retail prices viz Rs. 15 for Super star; Rs.10 for Deluxe and Rs.7.50 for Economy model. His marketing manger opines that the wholesalers and retailers have to be given atleast 30% discount.

The estimated fixed cost would be around Rs.70,000 and variable cost per unit would be Rs.3.50.

(a) Calculate break-even point for each model of ball pen.

(b) Howmuch should the manufacturer sell in order to make a profit of Rs.21,000?

Workout for each model of ball pen.

Solution for sum -9

(a) CALCULATION OF CONTRIBUTION PER UNIT

Particulars	Super Star	Deluxe	Economy
Selling price per unit	15.00	10.00	7.50
Less: Discount at 30%	4.50	3.00	2.25
Net selling price per unit	10.50	7.00	5.25
Less: Variable Cost per unit	3.50	3.50	3.50
Contribution per unit	7.00	3.50	1.75

Solution for sum –9 (contd.)

(a)Calculation of B.E.P.(in units) for each model:

B.E.P(in units) = fixed expense / contribution per unit

=	**70,000 / 7**	**70,000 / 3.50**	**70,000 / 1.75**
	=10,000 units	**20,000 units**	**40,000 units**

(b)Sales of each model to earn a profit of Rs.21,000 :

=Fixed expenses + Desired profit / contribution per unit

=	**91,000 / 7**	**91,000 / 3.50**	**91,000 / 1.75**
	=13,000 units	26,000 units	52,000 units

Sum – 10 (Make or Buy Decision)

The management of a company finds that while the cost of making a component part is Rs.10, the same is available in the market at Rs. 9 with an assurance of continuous supply.

Give suggestion whether to make or buy this part. Give also your views in case the supplier reduces the price form RS. 9 to Rs.8.

The cost information is as follows:

Material	Rs.3.50
Direct labour	Rs.4.00
Other variable expenses	Rs. 1.00
Fixed expenses	Rs. 1.50
TOTAL	Rs. 10.00

Solution for sum -10

Solution:

To take a decision on whether to make or buy the component part, fixed expenses should not be added to the cost because these will be incurred even if the part is not produced. Thus, additional cost of the part will be as follows;

Material	Rs.3.50
Direct labour	Rs.4.00
Other variable expenses	Rs. 1.00
TOTAL	Rs. 8.50

Solution for sum-10 (contd.)

- The company should produce the part if the part is available in the market at Rs.9.00 because the production of every part will give to the company a contribution of 50 paise (Rs. 9.00 – Rs.8.50).
- The company should not manufacture the part if it is available in the market at Rs.8 because additional cost of producing the part is 50 paise (Rs.8.50 – Rs.8.00) more than the price at which it is available in the market.

Sum – 11(Accepting additional order)

The cost sheet of a product is given below:

Direct Material		Rs. 5.00	
Direct Wages		3.00	
Factory Overheads:			
Fixed	Re. 0.50		
Variable	Re. 0.50	1.00	
Administrative Expenses			0.75
Selling & Distribution Overheads:			
Fixed	Re. 0.25		
Variable	Re. 0.50	0.75	
		Rs. 10.50	

Selling price per unit is Rs.12.

The above figures are for an output of 50,000 units. The capacity for the firm is 65,000 units. A foreign customer is desirous of buying 15,000 units at a price of Rs.10 per unit.

Advice the manufacturer whether the order should be accepted. What will be your advise if the order were from a local merchant?

Solution for sum-11

Marginal Cost statement for Additional 15,000 units

Particulars	Per unit(Rs.)	15,000 Unit
Selling price	10	1,50,000
Less: Marginal Cost: Direct Material 5.00 Direct wages 3.00 Variable O.H: Factory 0.50 Selling O.H 0.50	9	1,35,000
CONTRIBUTION	1	15,000

Solution for sum-11 (contd.)

The order from the foreign customer will give an additional contribution of Rs.15,000. Hence, the order should be accepted because additional contribution of Rs.15,000 will increase the profit by this amount as fixed expenses have already been recovered from the internal market.

The order from the local merchant should not be accepted at a price of Rs.10 which is less than normal price of Rs.12. This price will affect relationship with other customers and there will be a general tendency of reduction in the price.

Sum – 12(Key Factor or Limiting Factor)

From the following data, which product would you recommend to be manufactured in a factory, time being the key factor?

particulars	Per Unit of Product A	Per Unit of Product B
Direct Material	24	14
Direct Labour @Re.1 per hour	2	3
Variable Overhead @ 2 per hour	4	6
Selling Price	100	110
Standard time to produce	2hours	3hours

Solution for sum-12

MARGINAL COST STATEMENT

Particulars	(Rs.)	Product A (Rs.)	(Rs.)	Product B (Rs.)
Selling Price		100		110
Less: Marginal Cost:				
Direct Material	24		14	
Direct Labour	2		4	
Variable Overhead	4	30	6	87
CONTRIBUTION		70		87
Standard time to produce		2hours		3hours
Contribution per hour		70/2 =Rs.35		87/3 =Rs.29

Contribution per hour of product A is more than that of product B by Rs. 6.

Therefore, product A is more profitable and is recommended to be manufactured.

Sum – 13 (Suitable product mix or sales mix)

Following information has been made available from the cost records of United Automobiles Ltd. manufacturing spare parts.

Direct Materials		Per Unit
	X	Rs.8
	Y	6
Direct Wages		
	X	24 hours at 25 paise per hour
	Y	16 hours at 25 paise per hour
Variable overheads		150% of wages
Fixed overheads		Rs.750
Selling price		
	X	Rs.25
	Y	20

The directors want to be acquainted with the desirability of adopting any one of the following alternative sales mixes in the budget for the next period. (a)250 units of X and 250 units of Y(b)400 units of Y only(c)400 units of X and 100 units of Y(d)150 units of x and 350 units of Y.

State which of the alternative sales mixes you would recommend to the management?

Solution for sum-13

MARGINAL COST STATEMENT (Per Unit)

Particulars	Product X	Product Y
Direct Material	8	6
Direct Wages	6	4
Variable Overheads	9	6
Total Marginal Cost	23	16
CONTRIBUTION	2	4
Selling price	25	20

Solution for sum-13(contd.)

SELECTION OF SALES ALTERNATIVES:

(a) 250 units of X and 250 units of Y

Contribution:

Product X 250 units X 2	500	
Product Y 250 units X 4	1000	
	1500	
Less: Fixed Overheads		750
PROFIT	750	

Solution for sum-13(contd.)

(b) 400 units of Y only

Contribution:

Product Y 400 units X 4		1600
Less: Fixed Overheads		750
PROFIT	850	

Solution for sum-13(contd.)

(c) 400 units of X and 100 units of Y

Contribution:		
Product X 400 units X 2	800	
Product Y 100 units X 4	400	
	1200	
Less: Fixed Overheads		750
PROFIT		450

Solution for sum-13(contd.)

(d) 150 units of X and 350 units of Y

Contribution:		
Product X 150 units X 2	300	
Product Y 350 units X 4	1400	
	1700	
Less: Fixed Overheads		750
PROFIT	950	

The alternative (d) is most profitable since it gives the maximum profit of Rs.950

Sum – 14

SV Ltd. A multi product company, furnishes you the following data relating to the year 2000.

particulars	First Half of the year	Second Half of the year
Sales	45,000	50,000
Total Cost	40,000	43,000

Assuming that there is no change in prices and variable costs and that t
Expenses are incurred equally in the two half year periods calculated for
Following :

(i) The Profit Volume ratio
(ii) Fixed Expenses
(iii) Break even sales
(iv) Percentage of margin of safety.

Capital Budgeting

Meaning Of Capital Budgeting

Capital budgeting is the process of making investment decisions regarding capital expenditures. A capital expenditure is an expenditure incurred for acquiring or improving the fixed assets, the benefits of which are expected to be received over a number of years in future.

Capital budgeting is also known as, "a long-term planning for making and financing proposed capital outlays".

Definition of Capital Budgeting

Charles T . Horngreen has defined capital budgeting as " a long term planning for making and financing proposed capital outlays".

Importance of capital budgeting

Capital budgeting decisions are among the most crucial and critical business decisions. Special care should be taken in making these decisions on account of the following reasons.

1) Heavy Investment
2) Permanent Commitment of Funds
3) Long Term Effect on Profitability
4) Irreversible in Nature

Methods To Evaluate Capital Budgeting

There are a number of methods in use for evaluating capital investment proposals.

1) Pay Back Period Method
2) Accounting Rate of Return Method (ARR)
3) Discounted Cash Flow Method
   a) Net Present Value Method (NPV)
   b) Present Value Index Method
   c) Internal Rate of Return Method (IRR)

Formulae

1) PAY BACK PERIOD METHOD

$$\text{Pay back period} = \frac{\text{Initial investment}}{\text{Annual cash inflow}}$$

2) ACCOUNTING OR AVERAGE RATE OF RETURN METHOD

a) $$\text{ARR} = \frac{\text{Average Annual profit}}{\text{Original investment}} \times 100$$

(OR)

b) $$\text{ARR} = \frac{\text{Average Annual profit}}{\text{Average investment}} \times 100$$

$$\text{Average Investment} = \frac{\text{Original Investment} - \text{Scrap}}{2}$$

SUMS – PAY BACK METHOD

1. A project costs Rs.1,00,000 and yields an annual cash inflow of Rs.20,000 for 7 years. Calculate pay back period.

$$\text{Pay Back Period} = \frac{\text{Initial Investment}}{\text{Annual Cash Inflow}}$$

$$= 1{,}00{,}000/20{,}000$$

$$= 5 \text{years.}$$

Sum – 2

Calculate pay back period for a project which requires a cash outlay of Rs.10,000 and generates cash inflows of Rs. 2,000; Rs.4,000; Rs.3,000; Rs.2000 in the first, second, third and fourth year respectively.

Year	Cash Inflows	Cumulative Cash Inflows
1	2000	2000
2	4000	6000
3	3000	9000
4	2000	11000

Solution – 2

Cost of the project is Rs. 10,000. In the first 3years Rs. 9,000 is recovered. The remaining Rs. 1,000 is to be recovered in the fourth year.

Time required to recover this balance Rs.1000 is,

For recovery of Rs. 2,000 in the fourth year, time required is 12 months.

For recovery of Rs. 2,000 in the fourth year, time required = 1000/2000 X12 = 6 months.

Hence, pay back period = 3 years and 6 months.

Sum – 3

3. There are two projects A and B. The cost of the project is Rs.30,000 in each case. The cash inflows are as under;

	Cash Inflows	
Year	Project A	Project B
1	10,000	2,000
2	10,000	4,000
3	10,000	24,000

Calculate pay back period.

Solution – 3

Year	Product A		Product B	
	Cash Inflows	Cumulative cash inflow	Cash Inflows	Cumulative cash inflow
1	10,000	10,000	2,000	2,000
2	10,000	20,000	4,000	6,000
3	10,000	30,000	24,000	30,000

The pay back period is 3years in both cases. However, project A is better Compared to project B because cash inflows are greater in the initial years.

Sum – 4

A project cost Rs. 5,00,000 and yields annually a profit of Rs.80,000 after depreciation at 12% p.a. but before tax of 50%. Calculate Pay back period.

Pay Back Period = $\frac{\text{Initial Investment}}{\text{Annual Cash Inflow}}$

Initial investment = Rs.5,00,000

Annual cash inflow = Profit after tax plus Dep.

Profit Before tax	Rs. 80,000	
Less: Tax @ 50%	40,000	
Profit after Tax		40,000
Add: Depreciation 12%	60,000	
ANNUAL CASH INFLOW	1,00,000	

Pay back period = Rs.5,00,000/ Rs.1,00,000 = 5 years.

Sum – 4 (Accounting Rate of Return Method)

Calculate the average rate of return for project A and B from the following:

	Project A	Project B
Investment	20,000	30,000
Expected life	4years	5years

(no salvage value)

Projected net income(after interest, depreciation and taxes)

If the required rate of return is 12%, which project should be undertaken?

Years	Project A	Project B
1	2000	3000
2	1500	3000
3	1500	2000
4	1000	1000
5	---	1000
Total	6000	10000

Solution – 4

Particulars	Project A	Project B
Profit (after dep., int. & taxes)	Rs. 6,000	Rs. 10,000
Life of the project	4 years	5 years
Average net profit	6000/4= 1500	10000/5=2000
Investment in the project	Rs.20,000	Rs. 30,000

Accounting Rate of Return (ARR) = $\frac{\text{Average Annual profit}}{\text{Original investment}} \times 100$

Project A = 1500/ 20,000 X 100 = 7.5%

Project B = 2000/30,000 X 100 = 6.67%

Alternatively, ARR = $\frac{\text{Average Annual profit}}{\text{Average investment}} \times 100$

Average investment = $\frac{\text{Investment at the beginning + investment at the end}}{2}$

Average investment : A = 20,000 + 0/2 = 10,000

B = 30,000 + 0 / 2 = 15,000

ARR: A = 1500/10000 X 100 = 15%

B = 2000/ 15000 X 100 = 13.33%

PROJECT A IS SUGGESTED.

Sum – 5 (Net Present Value)

Project X initially costs Rs.25,000. It generates the following cash inflows:

Year	Cash Inflows	Present Value of Re. 1 at 10%
1	Rs. 9,000	0.909
2	Rs. 8,000	0.826
3	Rs. 7,000	0.751
4	Rs. 6,000	0.683
5	Rs. 5,000	0.621

Taking the cut-off rate at 10%, suggest whether the project should be accepted or not.

Solution – 5

Calculation of Net Present Value

Year	Cash Inflows (RS.)	Present value Factor at 10%	Present value of Cash inflows (Rs.)
1	9,000	0.909	8,181
2	8,000	0.826	6,608
3	7,000	0.751	5,257
4	6,000	0.683	4,098
5	5,000	0.621	3,105
Total present value of cash inflows			27,249
Less: Total present value of cash outflows			25,000
NET PRESENT VALUE (NPV)			2,249

As Net Present value is positive, the project is recommended.

Sum – 6

The Alpha Co. Ltd., is considering the purchase of a new machine. Two alternative machines (A and B) have been suggested, each having an initial cost of Rs. 4,00,000 and requiring Rs. 20,000 as additional working capital at the end of 1st year. Earnings after taxation are expected to be as follows:

Year	Machine A	Machine B
1	40,000	1,20,000
2	1,20,000	1,60,000
3	1,60,000	2,00,000
4	2,40,000	1,20,000
5	1,60,000	80,000

The company has a target of return on capital of 10% and on this basis, you are required to compare the profitability of the machines and state which alternative you consider financially preferable?

Year	1	2	3	4	5
Present value at 10%	0.91	0.83	0.75	0.68	0.62

Solution – 6

THE ALPHA COMPANY
Statement Showing Net Present Values

		Machine A		Machine B	
Year	Discount Factor	Cash Inflow (Rs.)	Present Value (Rs.)	Cash Inflow (Rs.)	Present Value (Rs.)
1	0.91	40,000	36,400	1,20,000	1,09,000
2	0.83	1,20,00	99,600	1,60,000	1,32,800
3	0.75	1,60,000	1,20,000	2,00,000	1,50,000
4	0.68	2,40,000	1,63,200	1,20,000	81,600
5	0.62	1,60,000	99,200	80,000	49,600
Total P.V of Cash Inflows			5,18,400		5,23,200
Less: Total present value of cash outflows (Rs. 4,00,000+ 20,000) .91			4,18,200		4,18,200
NET PRESENT VALUE			1,00,200		1,05,000
Machine B is preferable as it has a higher Net Present Value					

Sum – 7

Victoria Ltd., is considering the purchase of one of the two machine. As the basis for selection, the following data was developed.

particulars	Machine A	Machine B
Original Cost	25,565	25,565
Profit After Tax:		
Year 1	687	4,687
Year 2	1,687	3,687
Year 3	2,687	2,687
Year 4	3,687	1,687
Year 5	4,687	687
TOTAL	13,435	13,435

The expected rate of return for the company is 16%. Both the machines have a life of five years and will not have any salvage value. The company is in the 40% tax bracket. You are required to calculate NPV and PV index. Suggest the most profitable machine.

Solution – 7

To ascertain present value, cash inflows are to be taken into account.

Cash flows = profit after tax + Depreciation

Depreciation = Cost of the Assets /Life of the assets

Depreciation = Rs. 25,565/5 (Machine A) = 5,113

= Rs. 25,565/5(Machine B) = 5,113

CALCULATION OF CASH INFLOWS

	MACHINE A			MACHINE B		
YEAR	PAT	Depn.	Cash inflows	PAT	Depn.	Cash inflows
1	687	5,113	5,800	4,687	5,113	9,800
2	1,687	5,113	6,800	3,687	5,113	8,800
3	2,687	5,113	7,800	2,687	5,113	7,800
4	3,687	5,113	8,800	1,687	5,113	6,800
5	4,687	5,113	9,800	687	5,113	5,800

Solution – 7(contd.)

CALCULATION OF NET PRESENT VALUES

		MACHINE A		MACHINE B	
YEAR	P.V. Factor @ 16% (Rs.)	Cash Inflows (Rs.)	P.V. of cash inflows (Rs.)	Cash Inflows (Rs.)	P.V. of cash inflows (Rs.)
1	0.862	5,800	5,000	9,800	8,448
2	0.743	6,800	5,052	8,800	6,538
3	0.641	7,800	5,000	7,800	5,000
4	0.552	8,800	4,858	6,800	3,754
5	0.476	9,800	4,665	5,800	2,761
Total present value of cash inflows			24,575		26,501
Present value of outflow			25,565		25,565
NET PRESENT VALUE			(–) 990		936

Solution – 7(contd.)

Present value index:

$$= \frac{\text{Total Present Value of Cash Inflows}}{\text{Total Present Value of Cash Outflows}} \times 100$$

Machine A	Machine B
$\frac{24,575}{25,565} \times 100$	$\frac{26,501}{25,565} \times 100$
= 96.13%	= 103.66%

The net present value is negative in the case of Machine A. Machine B has a higher NPV of Rs.936. Present value index is also high for Machine B. Hence, Machine B is recommended.

UNIT – V

BUDGETS

BUDGETS

MEANING OF BUDGET

A budget is a plan of action expressed in financial terms or non-financial terms. It is prepared for a definite period of time. It is a planned estimate of future business conditions such as the sales, cost and profit. A budget is a tool which helps the management in planning and control of business activities.

DEFINITION OF BUDGET

According to ICMA, England, a budget is, “a financial and/ or quantitative statement, prepared and approved prior to a defined period of time, of the policy to be pursed during the period for the purpose of attaining a given objective”.

It is also defined as, “ a blue print of a projected plan of action of a business for a definite period of time.

Objectives of Budgetary control

- To define the goal of the enterprises.
- To provide long and short period plans for attaining these goals.
- To co-ordinate the activities of different departments.
- To operate various cost centres and departments with efficiency and economy.
- To eliminate waste and increase the profitability.
- To estimate capital expenditure requirements of the future.
- To correct deviations from established standards.
- To indicate to the management as to where action is needed to solve problems without delay.

Different Types of Budgets

The budgets are classified according to their nature. The following are the types which are commonly used

A. Classification According to Time:

i) Short period budget
ii) Long period budget
iii) Current Budget

B. Classification According to Functions:

i) Sales Budget
ii) Production Budget
iii) Material Budget
iv) Direct Labour Budget
v) Factory Overhead Budget
vi)Administrative expenses Budget
vii) Selling & Distribution overhead budget
viii) Capital Expenditure Budget
ix) Cash Budget
x) Master Budget

C. Classification According to Flexibility:

i) Fixed Budget
ii) Flexible Budget

PRODUCTION BUDGET

1. Prepare a production budget for three months ending March 31,2008 for a factory producing four products, on the basis of the following information:

Type of Product	Estimated Stock on Jan. 2008 (Units)	Estimated Sales during Jan. 2008 (Units)	Desired Closing Stock March 31, 2008 (Units)
A	2,000	10,000	5,000
B	3,000	15,000	4,000
C	4,000	13,000	3,000
D	5,000	12,000	2,000

Solution- 1

Production Budget for 3 months ending 31-3-2008

Particulars	A (Units)	B (Units)	C (Units)	D (Units)
Estimated Sales	10,000	15,000	13,000	12,000
Add: Desired Closing stock	5,000	4,000	3,000	2,000
	15,000	19,000	16,000	14,000
Less: Opening Stock	2,000	3,000	4,000	5,000
Estimated Production	13,000	16,000	12,000	9,000

Cash Budget

2. From the particulars given below prepare a cash budget for the month June 2008.

a. Expected sales: April – Rs.2,00,000; May – Rs.2,20,000; June – Rs.1,90,000. Credit allowed to customers is two months and 50% of the sales of every month is on cash basis.

b. Estimated purchases: May – Rs. 1,20,000; June –Rs. 1,10,000; 40% of the purchase of every month is on cash basis and the balance is payable next month.

c. Rs. 2,000 is payable as rent every month.

d. Time lag in payment of overhead is ½ month. Overhead : for May 12,000; for June 11,000.

e. Depreciation for the year is Rs.12,000.

f. Interest receivable on investment during June and December Rs. 3,000 each.

g. Estimated Cash balance as on 1-6-2008 is Rs. 42,500.

Solution-2

Cash Budget for the month of June 2008

Particulars	Rs.	Rs.
Opening Balance		42,500
Receipts:		
Cash Sales	95,000	
Debtors	1,00,000	
Interest on Investment	3,000	1,98,000
		2,40,000
Less: Payments:		
Cash purchases	44,000	
Creditors	72,000	
Rent	2,000	
Overheads May – 6000		
June – 5500	11,500	1,29.500
Closing Balance		1,11,000

Sum – 3

Prepare a cash budget for 3 months ending 30th June.

a. 20% of the sales are on cash basis and the balance on credit.

b. 3% of the credit sales are returned by the customers, 2% of the total debtors constitute bad debts. 50% of the good debtors are collected in the month of sales and the rest in the next.

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

d. No time lag applies to the payment of general expenses.

e. Salaries of Rs. 1,000 p.m is paid in addition to general expenses.

f. Rent of Rs. 1000 p.m is paid in addition to general expenses.

g. Cash in hand estimated on 1st April Rs. 10,000. This is the minimum desired cash balance at the end of each month. Any

Month	March	April	May	June
Sales	60,000	70,000	80,000	90,000
Purchases	35,000	40,000	55,000	60,000
General Expenses	5,000	6,000	7,000	8,000

Solution-3

Cash Budget for 3 Months ending 30th June

Particulars	April	May	June
Opening Balance	10,000	10,000	10,000
Receipts:			
Cash Sales	14,000	16,000	18,000
Debtors	49,400	57,000	64,600
Total Receipts (A)	73,400	83,000	92,600
Payments:			
Creditors(1 month)	35,000	40,000	55,000
General expenses	6,000	7,000	8,000
Salaries	5,000	5,000	6,000
Rent	1,000	1,000	1000
Total Payments	47,000	53,000	70,000
Add: Cash to be maintained	10,000	10,000	10,000
Total Cash Required (B)	57,000	63,000	80,000
Excess amount put in F.D (A-B)	16,400	20,000	12,600

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

Particulars	At 70% Capacity	At 80% Capacity	At 90% Capacity
Variable Overheads:			
Indirect Labour	--	12,000	--
Stores including spares	--	4,000	--
Semi- Variable overheads:			
Power(30% fixed,70% variable)	--	20,000	--
Repairs & Maintenance (60% fixed, 40 % variable)	--	2,000	--
Fixed Overhead:			
Depreciation	--	11,000	--
Insurance	--	3,000	--
Salaries	--	10,000	--
TOTAL OVERHEADS	--	62,000	--
Estimated direct labour hours		1,24,000 Hours	

Solution – 4

Particulars	At 70% Capacity	At 80% Capacity	At 90% Capacity
Variable Overheads:			
Indirect Labour	10,500	12,000	14,500
Stores including spares	3,500	4,000	4,500
Semi- Variable overheads:			
Power :30% fixed	6,000	6,000	6,000
70% variable	12,250	14,000	15,750
Repairs & Maintenance			
60% fixed,	1,200	1,200	1,200
40 % variable	700	800	900
Fixed Overhead:			
Depreciation	11,000	11,000	11,000
Insurance	3,000	3,000	3,000
Salaries	10,000	10,000	10,000
TOTAL OVERHEADS	58,150	62,000	65,850
Estimated direct labour hours	1,08,000	1,24,000	1,39,500
Direct Labour Hour Rate	Re. 0.536 58,500/1,08000 =0.536	Re. 0.500 62,000/1,24,000 = 0.500	Rs. 0.472 65,850/1,39,500 =0.472

Sum – 5

The expenses for budgeted production of 10,000 units in a factory are furnished below:

Material	70
Labour	25
Variable overheads	20
Fixed overheads (Rs. 1,00,000)	10
Variable Expenses(Direct)	5
Selling Expenses(10% fixed)	13
Distribution Exp. (20%fixed)	7
Administration Expenses	5
Total Cost per unit	155

Prepare a budget for production of

(a) 8,000 units ; (b) 6,000; (c) indicate cost per unit at both the levels.

Assume that administration expenses are fixed for all levels of production

Solution- 5: Flexible Budget

Particulars	10,000 units		8,000 units		6,000 units	
	Per unit	Amount	Per unit	Amount	Per unit	Amount
Production Exp.						
Material	70.00	7,00,000	70.00	5,60,000	70.00	4,20,000
Labour	25.00	2,50,000	25.00	2,00,000	25.00	1,50,000
Overheads	20.00	2,00,000	20.00	1,60,000	20.00	1,20,000
Direct variable expenses	5.00	50,000	5.00	40,000	5.00	30,000
Fixed overheads	10.00	1,00,000		1,00,000		1,00,000
selling expenses						
Fixed 10%	1.30	13,000	1.625	13,000	2.167	13,000
Variable 90%	11.700	1,17,000	11.700	93,600	11.700	70,200
Distribution Exp.						
Fixed 20%	1.40	14,000	1.750	14,000	2.334	14,000
Variable 80%	5.60	56,000	5.60	44,800	5.60	33,600
Administrative Exps	5.00	50,000	6.250	50,000	8.333	50,000
	155.00	15,50,000	159.425	12,75,400	166.801	10,00,800

ZERO BASE BUDGETING

Meaning of Zero Base Budgeting:

- Zero Base Budgeting is starting from Scartch. (zero base). Every year is taken as a new year and previous year is not taken as the base, in the preparation of budgets. Rather zero is taken as the base.
- ZBB proceeds on the assumption that nothing is to be allowed.
- A manager has to justify why he wants to spend.
- The manager proposing an expenditure or activity has to provide that it is essential and the amounts asked for are reasonable.

Definition of ZBB

According to Peter A. Phyrr. ZBB is defined as “ a planning and budgeting process which requires each manager to justify his entire budget request in detail from scartch (hence 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”.

Steps in Zero Base Budgeting

1. **Determination of Objectives:**
   The first step in ZBB is the clear definition of the objectives of budgeting.
2. **Determination of the Extent of Application:**
   Whether ZBB should be introduced in all operational areas or only in some selected areas is to be decided.
3. **Identification of Decision units:**
   Decision unit refers to a department, a project or a product line to which ZBB is to be applied.
4. **Cost-Benefit Analysis:**
   Cost benefit analysis is undertaken for each activity of the decision unit.
5. **Preparation of Budget:**
   The activities and projects for which benefit is more than the cost are ranked. Priority is accorded to the most profitable projects.

Advantages of ZBB

- It provides a systematic way to evaluate different operations and programmes.
- It enables the management to allocate resources according to benefit or importance.
- It ensures that only essential programmes are undertaken and activities are performed in the best possible manner.
- It helps in identifying and controlling wasteful expenditure.
- It does not allow some expenditure/activity simply because it was done in the past.
- It allows the only activities which will help in the achievement of organizational.
- It is a convenient tool in integrating the managerial functions of planning and control.

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