COST ACCOUNTING

COST SHEET

MEANING OF COST SHEET

Cost sheet is a statement showing various components of total cost of output of a particular product or service produced during a particular period. It may be prepared on actual basis or estimated basis

CONTENTS OF COST SHEET

1. Different components of Total cost (say prime cost, Factory cost, cost of goods produced)

2. Total cost

3. Cost per unit

4. Previous year's figures or budgeted figures or standard figures to facilitate comparison if the manager so desires.

5. Other information which may be incorporated in to a cost sheet

✓ Name of the product, cost centre or cost unit

✓ Period to whom the statement relates

✓ Details of various components

✓ Item wise cost per unit

✓ Changes in stock position

✓ Cost of goods sold

✓ Profit or loss for the period

PERIODICITY

Cost sheet may be prepared weekly, fortnightly, monthly, quarterly, half yearly and yearly.

USES OF COST SHEET

The cost sheet serves the following purpose:

a) Helps in ascertaining in the total cost, the different components of total cost and cost per unit of output.

b) Helps in fixing selling prices or quotations

c) Facilitates the comparison of actual cost with standard cost, actual cost of one period with that of another period

d) Helps in controlling the costs

e) Helps in preparation of estimates for submission of tenders.

TYPES

a. Historical cost sheet: Cost sheet prepared or the basis of actual costs after the actual costs have been incurred is called 'Historical Cost Sheet'.

b. Estimated cost sheet: Cost sheet prepared on the basis of estimated costs before actual commencement of production, is called 'Estimated Cost sheet'.

ADVANTAGES OF COST SHEET

• It is a simple and useful medium of communication which gives information about costs to all levels of management in a simple and lucid form.

• It helps in comparative study of the various elements of costs with the past results and standard cost. Thus it helps the management in control process.

• It helps the management in fixing up the selling price more accurately.

• If acts as a guide to the manufacturer and helps him in formulating a definite and profitable production policy.

• It enables a producer keep a close watch and control over the cost of production.

• It shows the total cost and the per unit of the units produced during the given period.

DISADVANTAGES OF COST SHEET

▪ In most of the cases, cost sheet is prepared on historical basis. So we know the status of costs incurred by an organization only after costs have been incurred.

▪ The accuracy of cost sheet cannot be guaranteed.

▪ Cost sheet ignores finance costs like interest, donations, income tax etc.

STEP	Element of cost	Rs.	Rs.
A	Direct materials:		
	Opening stock of raw materials	XX	
	Add: Purchases of raw materials	XX	
	Expenses on freight etc	XX	
	Less: Closing stock of raw materials	(XX)	
	Net material consumed		XX
B	Direct wages		XX
C	Direct expenses		XX
D	PRIME COST		XXX
E	Works overheads	XX	
F	Less: Sale of scrap/ waste/ recoveries	(XX)	
G	Work in progress:		
	Add: Opening stock	XX	
	Less: Closing stock	(XX)	XX
H	WORKS COST (D + E + F + G)		XXX
I	QUALITY CONTROL COSTS		XXX
J	R & D COST		XXX
K	Office and administration overheads		XXX
L	COST OF PRODUCTION (H + I + J + k)		XXX
M	Finished goods:		
	Add: Opening stock		XX
	Less: closing stock		(XX)
N	COST OF GOODS SOLD (L + M)		XXX
O	Sales/ distribution overheads		XXX
P	COST OF SALES		XXX
Q	(+) Profit/ (-) Loss		XXX
R	SALES		

ASSIGNMENT OF COST SHEET

Questionno.1

Opening stock of raw material Rs.52,000

Opening stock of WIP Rs.46,000

Purchases of raw material Rs.2,55,000

Direct labour cost Rs.85,000

Factory overheads Rs.76,000

Closing stock of raw material Rs.61,000

Closing stock of work in progress Rs.36,000

Compute cost of goods manufactured

Question no.2

A Ltd. purchased materials of Rs.4,40,000 and incurred direct labour of Rs.3,20,000 during the year ended June 30, 2010. Factory over heads for the year were Rs.2,80,000.

The inventory balance are as follows:

	July1,2009	June30,2010
Finished Goods	Rs.90,000	Rs.1,05,000
Work In progress	Rs.1,21,000	Rs.1,10,000
Materials	Rs.1,00,000	Rs.1,05,000

Compute:

a)Cost of goods manufactured

b)Cost of goods sold

Questionno.3

From the following particulars prepare cost sheets how showing various elements of cost:

Opening stock of raw material	Rs.1,10,000
Purchases of raw materials	Rs.8,25,000
Carriage Outwards	Rs.28,500
Direct Wages	Rs.4,21,400
Direct Power	Rs.25,840
Technical Directors salary	Rs.40,590
Factory rent, rates and insurance	Rs.10,140
Sale of factory scraps	Rs.1,460
Depreciation on Factory buildings	Rs.75,200
Closing Work in progress	Rs.1,20,260
Factory stationary	Rs.12,340
Opening stock of finished goods	Rs.45,280
Closing stock of raw materials	Rs.36,920
Fees to brand ambassador	Rs.2,00,000
Stationery and printing	Rs.12,200
Staff Salaries	Rs.6,30,000
Trade discount	Rs.1,20,000
Office Rent	Rs.60,000
Free sample expenses	Rs.20,320
Closing stock of finished goods	Rs.50,240

Sales are made to earn profit of10% on cost price.

Questionno.4

From the books of AB Ltd, the following details have been extracted For the quarter ending 31st December,2014:

Opening stock of materials Rs.2,70,000

Closing stock of materials Rs.3,00,000

Purchases of materials Rs.12,48,000

Direct wages Rs.3,57,600

Direct expenses Rs.1,20,000

Indirect wages Rs.24,000

Salaries to administrative staff Rs.60,000

Carriage inwards Rs.48,000

Carriage outwards Rs.37,500

Manager's salary Rs.72,000

General charges Rs.37,200

Legal charges for criminal suit Rs.20,000

Commission on sales Rs.28,000

Fuel Rs.96,000

Electricity Charges(factory) Rs.72,000

Director's Fees Rs.36,000

Repairs to Plant and machinery Rs.63,000

Rent, rates and taxes–Factory Rs.18,000

Rent, rates and taxes–Office Rs.9,600

Depreciation on Plant and Machinery Rs.45,000

Depreciation on furniture Rs.3,600

Salesmen's salaries Rs.50,000

Audit fees Rs.18,000

i. The manager's time is shared between the factory and the office in the ratio of20:80

ii. Carriage outwards include Rs.7,500 being the carriage inwards on plant and machinery.

iii. Selling Price is 12 0% of cost price.

From the above details prepare detailed cost sheet for the quarter ending 31st December,2014.

Reconciliation

MEANING

Reconciliation of cost accounts and financial accounts is the process to find all the reasons behind disagreement in profit which is calculated as per cost accounts and as per financial accounts. There are many items which are shown in profit and loss account only when we make it as per financial accounting rules. There are also many items which are shown in costing profit and loss account only when we calculate profit as per cost accounting.

REASONS FOR DIFFERENCE IN COST ACCOUNTS

AND FINANCIAL ACCOUNTS

1. Items appearing in Financial accounts only:

a) Expenses/ losses/ apportionments debited in Financial accounts only.

b) Income credited in Financial accounts only.

2. Items appearing in Cost accounts only:

a) Expenses debited in Cost accounts only

b) Income credited in cost accounts only.

3. Different treatment in two accounts:

a) Valuation of opening and closing stocks

b) Methods of charging depreciation

c) Methods of recovery/ absorption of prime cost/ overheads in cost accounts.

EXPENSES/ LOSSES/ APPORTIONS APPEARING

ONLY IN FINANCIAL ACCOUNTS

1. Financial Expenses:

a) Interest paid on loans, F.D, debentures

b) Expenses on issue of shares, debentures.

c) Discount on issue of shares, debentures.

d) Underwriting commission on issue of shares.

2. Financial losses:

a) Penalties and fines

b) Damages paid as ordered by court

c) Capital losses such as Loss on sale of fixed assets, loss on sale of investment.

3. Apportions out of profit:

a) Donations

b) Transfer to reserve

c) Transfer to sinking fund

d) Income tax

e) Writing off fictitious assets like goodwill, preliminary expenses

INCOMES CREDITED IN FINANCIAL ACCOUNTS ONLY

a) Interest received on Bank F.D, deposits, loans, debentures

b) Dividend received

c) Premium on issue of shares and debentures

d) Rent received

e) Transfer fees received in respect of share transfer.

f) Capital gains such as profit on sale of fixed assets, profit on sale of investment

g) Penalties and fines or discount received from customers etc.

h) Damages received as ordered by court.

ITEMS APPEARING ONLY IN COST ACCOUNTS

1. Expenses debited only in Cost accounts:

a) Notional interest on owner's capital

b) Notional remuneration to owner for his labour or management

c) Notional rent to owner for use of his premises for business

2. Incomes credited only in Cost accounts:

a) Notional interest charged to owner for drawing (debit balance in capital account).

b) Notional rent charged to owner for personal use of business premises.

METHOD OF VALUATION OF STOCKS

1. Raw material stock – May be valued at FIFO basis in Cost accounts and LIFO basis in Financial accounts.

2. Finished goods stock – May be valued at cost of production including office overheads in Cost accounting. In Financial accounts, may be valued at cost of production excluding office expenses. FG may be also valued at cost or market price whichever is lower in Financial accounts. However, in Cost accounts, they may be valued at cost only.

3. WIP stock – May be valued at actual prime cost plus estimated percentage of overheads in Cost accounts. In Financial accounts, may be valued at prime cost.

METHODS OF CHARGING DEPRECIATION

The methods adopted for charging depreciation in Cost accounts and financial accounts may be different. In Cost accounts, SLM method may be followed whereas in Financial accounts, WDV method may be followed.

RECOVERY OF PRIME COST/ OVERHEADS

1. Materials – In cost accounts, sometimes, the cost of materials, labours or overheads is taken at an estimated or pre-determined value instead of actual expenditure. Thus, RM may be taken at a cost equal to Actual quantity consumed multiplied by Fixed rate. The actual cost of RM debited in cost accounts may be different from cost of RM debited in Financial accounts.

2. Wages – Like materials, wages to may be debited in Cost accounts at an estimated amount equal to Actual labour hours multiplied by fixed wage rate. The actual cost of wages debited in cost accounts may be different from cost of wages debited in Financial accounts. Further, treatment of idle time and overtime may be different in two sets of accounts leading to difference.

3. Overheads – Overheads are often debited or charged to products, processes etc. Overheads are absorbed/ recovered on the basis of percentage of material/ wages/ prime cost/ sale value and so on. The amount of overheads thus absorbed in Cost accounts is bound to be different from actual amount of overheads appearing in Financial accounts.

Q.1The net profit of a company for the year ended on 31st March2014 was Rs.56,600 as shown by the financial books. The cost accounts disclose profit of Rs.59,650 for the same period. On an examination of both the set so accounts, the following facts were discovered:

a)Goodwill written off in financial accounts Rs.1,500.

b)Transfer Fees received during the year Rs.200

c)Depreciation charged in financial accounts Rs.750

d)Depreciation recovered in cost statements Rs.1,000

e)Opening stock as per financial records Rs.13,000

f)Opening stock asp er cost statement Rs.12,000

g)ClosingstockasperfinancialrecordsRs.14,000

h)ClosingstockaspercoststatementRs.15,000

Prepare a reconciliation statement taking:

i. Financial profit as the starting point

ii. Cost profit as the starting point.

Q.2From the following, prepare a statement of reconciliation and find out profit or loss as per financial records:

Particulars	Amount
Net loss as per cost records	1,72,400

Works overhead under recovered in costing	3,120
Administrative over heads over recovered in costing	1700
Depreciation in financial accounts	11200
Depreciation in cost accounts	12500
Interest received	8750
Obsolescence Loss in financial accounts	5700
Provision for income tax	40,300
Opening Stock:	
- Financial records	52,600
- Cost records	54,000
Closing stock:	
- Financial records	52000
- Cost records	49600
Interest charges in cost accounts only	6000
Preliminary expenses written off	950

Q.3From the following particulars ,prepare reconciliation statement and ascertain costing profit/loss.

Net profit as per financial P/LaccountisRs.50,000.

Opening stock was over valued by Rs.2,000 in cost accounts as Compared to financial accounts.

Administrative overheads charged in financial books Rs.20,000 but recovered in cost Rs.40,000.

Income tax provision Rs.1,200.

Notional salary of proprietor in cost Rs.20,000.

Interest received Rs.12,000.

Closing stock as per financial books Rs.16,200.

Closing stock as per cost books Rs.19,000.

Marginal Costing

MEANING

Marginal costing is the practice of charging all marginal costs to operations processes or products and writing off all fixed costs against the profits in the period in which they arise. Marginal costing is a technique used for managerial decision making and not a system of costing like job costing or process costing.

BASIC FEATURES

➢All costs are classified on variability basis as fixed costs and variable costs.

➢Only variable costs are treated as product costs and hence are charged to operations, processes or products.

➢All fixed costs are treated as period costs and hence are written off against profits in the period in which they arise.

Particulars	Rs.
Sales	XX
(-) Variable costs	(XX)
Contribution	XX
(-) Fixed costs	(XX)
Profit	XX

APPLICATION OF MARGINAL COSTING

➢ Fixation of selling price -Price is one of the most significant factor that determines the market for the products as well as the volume of profit for the organization. Under, normal circumstances, the price of a product must cover the total costs of the product plus a margin of profit. However, under certain special circumstances, price has to be fixed even below the total cost. For instance, when there is a general trade depression (or) exploring new markets (or) accepting additional orders, the producer has to cut the price even below the total costs of the concerned product.

➢ Accepting bulk orders - Some bulk orders may be received from local dealers (or) foreign dealers asking for a price which is below the market price. This calls for a decision to accept (or) reject the order. The order from a local dealer should not be accepted at a price below the market price because it will affect the normal market and goodwill of the company on the other hand, the order from the foreign dealer should be accepted because it will give additional contribution, as the fixed costs have already been met.

CONTINUED

➢ Make or buy decision - When the management is confronted with the problem whether it would be economical to purchase a component or a product from outside sources, or to manufacture it internally, marginal cost analysis renders useful assistance in the matter.

Under such circumstances, a misleading decision would be taken on the basis of the total cost analysis. In case the proposal is to buy from outside then, what is already being made, and the price quoted by the outsider should be lower than the marginal cost. If the proposal is to make something what is being purchased outside, the cost of making should include all additional costs like depreciation on new plant, interest on capital involved and that cost should be compared with the purchase price.

➢ Selection of suitable product mix - When a factory manufacturers more than one product, a problem is faced by the management as to which product will give maximum profits. The solution is the products which give the maximum contribution are to be retained and their production should be increased.

CONTINUED

➢ Key factor - It is also known as limiting factor (or) governing factor or scarce factor. A key factor is one which restricts production and profit of a business. It may arise due to the shortage of material, labour, capital, plant capacity (or) sales. Normally, when there is no limiting factor, the selection of the product will be on the basis of the highest P/V ratio. But, when there are limiting factors, selection of the product will be on the basis of the highest contribution per unit of the key factor.

➢ Maintaining desired level of profit - A company has to cut prices of its products from time to time because of competition, Government regulations and other compelling reasons. The contribution per unit on account of such cutting is reduced while the industry is interested in maintaining a minimum level of its profits. In case the demand for the company's product is elastic, the maximum level of profits can be maintained by pushing up the sales. The volume of such sales can be found out by marginal costing techniques.

CONTINUED

➢ Alternative methods of production - Marginal costing is helpful in comparing the alternative methods of production i.e., machine work (or) hand work. The method which gives maximum contribution is to be adopted keeping in mind the limiting factor.

➢ Determination of optimum level of activity - The technique of marginal costing helps the management in determination the optimum level of activity. To make such a decision, contribution at different levels of activity can be found. The level of activity which gives the highest contribution will be the optimum level. The level of production can be raised till the marginal cost does not exceed the selling price.

ADVANTAGES OF MARGINAL COSTING

1. Constant in nature – Variable costs fluctuates from time to time, but in the long run, marginal costs are stable. Marginal costs remain the same, irrespective of the volume of production.

2. Effective cost control – It divides cost into fixed and variable. Fixed cost is excluded from product. As such, management can control marginal cost effectively.

3. Treatment of overheads simplified – It reduces the degree of over or underrecovery of overheads due to the separation of fixed overheads from production cost.

4. Un informant realistic valuation – As the fixed overhead costs are excluded from product cost, the valuation of work-in-progress and finished goods become more realistic.

5. Helpful to management – It enables the management to start a new line of production which is advantageous. It is helpful in determining which is profitable whether to buy or manufacture a product. The management can take decision regarding pricing and tendering.

LIMITATIONS OF MARGINAL COSTING

1. Difficulty to analyse overhead – Separation of costs into fixed and variable is a difficult problem. In marginal costing, semi-variable or semifixed costs are not considered.

2. Time element ignored – Fixed costs and variable costs are different in the short run; but in the long run, all costs are variable. In the long run all costs change at varying levels of operation. When new plants and equipment are introduced, fixed costs and variable costs will vary.

3. Unrealistic assumption – Assumption of sale price will remain the same at different levels of operation. In real life, they may change and give unrealistic results.

4. Difficulty in the fixation of price – Under marginal costing, selling price is fixed on the basis of contribution. In case of cost plus contract, it is very difficult to fix price.

5. Complete information not given – It does not explain the reason for increase in production or sales.

PROFIT VOLUME RATIO (P/V RATIO) P/V ratio is the ratio of contribution to sales and is usually expressed as a percentage.

It can be computed as follows:

1. P/V ratio = Contribution X 100/ Sales

2. P/V ratio = Sales (-) variable cost X 100

Sales

3. P/V ratio = Fixed cost (+) Profit X 100/Sales

4. P/V ratio = 100 – (Variable cost/ sales X 100)

5. P/V ratio = Change in profit X 100

Change in sales

BREAK EVEN POINT

1. It refers to volume of operations at which total sales revenue is just equal to total cost (i.e. Fixed cost and Variable cost)

2. It is a point at which there is neither profit nor loss.

3. It is a point at which contribution (i.e. sales minus variable cost) is just equal to fixed costs.

CONTINUED

1. B.E.P (in units) = Fixed cost _____

Contribution per unit

2. B.E.P (in value) = Fixed cost _____ X Selling price per unit

Contribution per unit

OR

= Fixed cost

P/V ratio

3. B.E.P (in %) = Fixed cost _____ X 100

Total contribution

OR

= BEP in value_____ X 100

Total sales (in value)

OR

= BEP (in units)_____ X 100

Total sales (in units)

MARGIN OF SAFETY (MOS)

1. Margin of safety is the difference between the Actual sales and break even sales.

2. At any level of MOS, fixed costs are zero since fixed costs are already recovered up to BEP.

3. At any level of MOS, the contribution(i.e. sales minus variable cost) is equal to profits since fixed costs are zero.

1. MOS (in units) = Actual sales (in units) (-) Break even sales (in units)

OR

= Profit_____

Contribution per unit

2. MOS (in value) = Actual sales (in value) (-) Break even sales (in value)

OR

= Profit_____ X Selling price per unit

Contribution per unit

OR

= Profit__

P/V ratio

OR

= Margin of safety (in units) X Selling price in units

CONTINUED

3. MOS (in % of sales)= MOS (in units)_____ X 100

Actual sales (in units)

OR

= MOS (in value)_____ X 100

Actual sales (in value)

OR

= Profit_____ ___X 100

Total contribution

OR

= 100 – Break Even Sales (in %)

SUMS-

Q.1The following information is given:

Selling price per unit Rs.500 Variable cost per unit Rs.300 Fixed costRs.2,00,000. Calculate Breakeven point in units and rupees.

Q.3 If P/V ratio is 60% and the marginal cost is Rs.20 .What will be the selling price?

Q.4 The ratio of variable cost to sales is 70%.The break-even point occur sat 60% of the capacity sales. Find the capacity sales when fixed costs are Rs.90,000.Also compute profit at 75% of the capacity sales.

Q.5 Ascertain Profit from the following details:

Sales Rs.2,00,000

Fixed Cost Rs .40,000

Break-even Point Rs.1,60,000

Q.6 Ascertain Sales from the following:

Fixed CostRs.20,000

Profit Rs.10,000

Break Even Point Rs.40,000

Standard costing

INTRODUCTION

Standard costing is one of the cost control techniques and not a method of costing like job costing or process costing. Standard means a criterion or a yardstick against which an actual activity can be compared to determine the difference between the two. Standard cost is the pre-determined based on technical estimate for materials, labour and overheads for selected period of time for a specified set of working conditions.

FEATURES OF STANDARD COST

a) It is a pre-determined cost which is computed before the cost is incurred (i.e. in advance of production).

b) It is based on engineering specification of all the factors affecting the cost.

c) It is computed for a specific period of time.

d) It is to be attained under a given set of efficient operating conditions.

MEANING OF STANDARD COSTING

Standard costing is the preparation and use of standard costs, their comparison with actual costs and the analysis of variance to their causes and points of incidence. On the basis of this definition, the steps involved in the techniques of standard costing are as follows:

1. Fixation of realistic (i.e. attainable) standards for each element of cost i.e. material, labour and overheads.

2. Comparison of actual cost with standard cost and find out the difference between the two known as variance. A variance which increases profits is called favourable and which decreases profits is called unfavourable.

3. Analysis of variance to ascertain the reasons for the variances.

4. Presentation of information to the appropriate level of management to decide upon the collective action to be taken.

APPLICABILITY OF STANDARD COSTING

The standard costing system is suitable where:

1. A sufficient volume of standard products or components is produced.

2. Methods, operations and processes are capable of being standardised.

3. A sufficient number of costs are capable of being controlled. Industries using process costing method like fertilizers, cement, steel etc. may use standard costing method because such industries are producing standardized products which are repetitive in nature. In job order Industries, it is not useful to employ full system of standard costing because in such

industries, each job undertaken may be different from another and setting standard for each job is difficult and expensive. It may be noted that the main objective of standard costing is to control cost through variance analysis.

TYPES OF STSNDARDS

1. Basic standard – it is a standard which is established for some base year and remain in use for longer period of time. Variances from basic standards indicate the trends of deviations of actual cost from the basic cost. It has no practical utility from the point of view of cost control.

2. Current standard – current standard is a standard which is established for a limited period of time and is related to current conditions.

3. Ideal standard – ideal standard is a standard which is based on perfect performance without making any allowance for unavoidable losses (e.g. Normal idle time, Normal waste/ scrap/ defectives/ spoilage etc.). It is merely a theoretical standard which is unrealistic and unattainable. Variances from idle standard generally indicates unfavourable deviations.

4. Expected or practical standard – Expected or practical standard is a standard which is which is based on expected performance after making a reasonable allowance for unavoidable losses (e.g. Normal idle time, Normal waste/ scrap/ defectives/ spoilage etc.). It is realistic and attainable standard. Variances from the expected standard indicates real deviations from the attainable performance.

5. Normal standard – Normal standard is a standard which is based on average performance in the past. It is attainable under normal conditions. The main purpose of normal standard is to eliminate variations in the cost arising out of trade cycles.

MATERIAL COST VARIANCE (MCV)

Meaning- It is the difference between the standard cost of direct materials specified for the output achieved and the actual cost of direct material consumed.

How to calculate-

MCV = std. cost of std. quantity of material for actual output(-) actual cost of actual quantity of materials consumed for actual output.

Or = (std quantity for actual output X standard price) – (actual quantity X actual price)

Or = (SQ X SP) – (AQ – AP)

Note: Standard quantity of material for actual output is calculated as follows:= std quantity of material X Actual outputted output

Or = std quantity of material required per unit X Actual output

Nature

1. Favourable (F) if the effect of variance is to increase the profit (i.e. where actual cost is less than standard cost)

2. Adverse (A) if the effect of variance is to decrease the profit (i.e. where actual cost is more than standard cost)

Illustration 1 – calculate Material cost variance from the following information:

Particulars	Standard	Actual
Output	100 units	200 units
Quantity of material required per unit of output	2 kg per unit	3 kg per unit
Price per kg	Rs.4 per kg	Rs.3

Solution –

Step 1 – Standard quantity for actual output (SQ) = 200 X 2 = 400 kg

Step 2 – Actual quantity for actual output (AQ) = 200 X 3 = 600 kg

Step 3 – MCV = (SQ X SP) – (AQ X AP) = (400 X 4) – (600 X 3) = Rs.200 (A)

Illustration 2 – calculate material cost variance from the following information:

Standard:	Material for 100 units	300 kg.
	Cost of materials	Rs.1,500
Actual:	Material purchased for 800 units	3,000 kg
	Cost of material	Rs.18,000
	Closing stock of material	500 kg

Solution –

Step 1 – std quantity for actual output = 300 Kg X 800 units = 2,400 kg 100 units

Step 2 – actual qty for actual production (AQ) = 3,000 kg – 500 kg = 2,500 kg

Step 3 – standard price (SP) = 1,500/ 300 kg = Rs.5

Step 4 – actual price (AP) = 18,000/ 3,000 kg = Rs.6

Step 5 – MCV = (SQ X SP) – (AQ X AP) = (2,400 X 5) – (2,500 X 6) = Rs.3,000 (A)

FIXED OVERHEAD EXPENDITURE VARIANCE-

Meaning-

It is that portion of Total fixed overheads cost variance which arises due to the difference between budgeted fixe overheads and Actual fixed overheads. Ir indicates under or over spending of Fixed overheads.

How to calculate?

Fixed overheads Expenditure variance

= Budgeted fixed overheads – actual fixed overheads

= (Budgeted hours X Std fixed overheads rate) – (Actual hours X Actual fixed overhead rate)

= (BH X SFOR) – (AH X AFOR)

Illustration 1 – A Ltd. provides you the following information:

Particulars	Budget	Actual
Output (units)	15,000	16,250
Hours	30,000	33,000
Overhead	Rs.45,000	Rs.50,000

Calculate Fixed overhead expenditure variance.

Solution – Fixed overhead expenditure variance= Budgeted fixed overheads – Actual fixed overheads

= (BH X SFOR) – Actual fixed overheads

SFOR = Budgeted fixed overheads/ Budgeted hours

= 45,000/30,000 = Rs.1.50 per hour.

= (30,000 X 1.50) – 50,000 = Rs.5,000(A)

FIXED OVERHEAD VOLUME VARIANCE (FOVV)-

Meaning- It is that portion of Total fixed overheads cost variance which arises due to the difference between Standard hours for actual output (SH) and Budgeted hours (BH). Adverse Fixed overheads volume variance indicates unabsorbed portion of Fixed overheads because of underutilization of capacity.

How to Calculate?

Fixed overheads volume variance = Absorbed Fixed overheads – Budgeted fixed overheads

Or = (std hours for actual output X std fixed overhead rate) –(budgeted hours X std fixed overhead rate)

Or = (SH X SFOR) – (BH X SFOR)

Or = (SH – BH) X SFOR

Illustration 2 – Using information given in Illustration 1, calculate Fixed overhead volume variance.

Solution – Fixed overhead volume variance = Absorbed fixed overheads – Budgeted fixed overheads

= (SH X SFOR) – (BH X SFOR)

= (32,500 X 1.50) – (30,000 X 1.50)

= Rs.3,750(F)

FIXED OVERHEADS EFFICIENCY VARIANCE (FOEV)-

Meaning-

It is that portion of Fixed overheads volume variance which arises due to the difference between Standard hours for actual output (SH) and Actual hours (AH). It indicates the increased or reduced output arising from efficiency above or below the standard which is expected.

How to calculate

Fixed overheads efficiency variance

= Absorbed fixed overheads – std fixed overheads

Or = (std hours for actual output X std fixed overhead rate) –(Actual hours X std fixed overhead rate)

Or = (SH X SFOR) – (AH X SFOR)

Or = (SH – AH) X SFOR

Illustration 3 – Taking the information given in Illustration 1, calculate Fixed overhead efficiency variance.

Solution –

Fixed overhead efficiency variance = Absorbed fixed overheads – std fixed overheads

= (SH X SFOR) – (AH X SFOR)

= (32,500 X 1.50) – (33,000 X 1.50) = Rs.750 (A)

FIXED OVERHEADS CAPACITY VARIANCE (FOCV)-

Meaning- It is that portion of Fixed overheads volume variance which arises due to the difference between Actual Hours (AH) and Budgeted hours (BH). It indicates working at higher or lower capacity usage than the standard.

How to calculate?

Fixed overheads capacity variance = Std fixed overheads – Budgeted fixed overheads

Or = (Actual hours X Std fixed overheads rate) – (Budgeted hours X std fixed overhead rate)

Or = (AH X SFOR) – (BH X SFOR)

Or = (AH – BH) X SFOR

Illustration 4 – Taking the information given in illustration 1, calculate Fixed overhead capacity variance.

Solution – Fixed overheads capacity variance= Std fixed overheads – Budgeted fixed overheads

= (AH X SFOR) – (BH X SFOR)

= (33,000 X 1.50) – (30,000 X 1.50) = Rs.4,500(F)

FIXED OVERHEAD CALENDAR VARIANCE

Meaning- It is that portion of Fixed overhead volume variance which arises due to the difference between the Actual no. of working days and the Budgeted no. of working days. In other words, It indicates the difference between Revised Budgeted Fixed overheads and Original Budgeted fixed overheads.

How to calculate?

Fixed overheads calendar variance = Revised budgeted Fixed overheads – Original budgeted fixed overheads

Or = (Revised budgeted hours X std. fixed overheads rate) –(Original budgeted hours X std. fixed overheads rate)

Or = (RBH X SFOR) – (BH X SFOR)

Or = (RBH – BH) X SFOR

Or = (Actual no. of working days – Budgeted no. of working days) X Standard fixed overhead rate

Note: Revised budgeted hours = Budgeted hours/ Budgeted no. of working days X Actual no. of working days.

Illustration 5 – PQR Ltd. provides the following information. Calculate Fixed overheads calendar variance.

Particulars	Budget	Actual
Output (units)	15,000	16,250
Hours	30,000	33,000
Fixed overheads	Rs.45,000	Rs.50,000
No. of working days	25	26

Solution – Method 1

Step 1: Revised budgeted hours= Budgeted hours/ Budgeted no. of working days X Actual no. of working days = 30,000/25 X 26 = 31,200

Step 2: Fixed overhead calendar variance

= Revised budgeted overheads – Original budgeted overheads

= (RBH X SFOR) – (BH X SFOR)

= (31,200 X 1.50) – (30,000 X 1.50) = Rs.1,800(F)

Method 2

Step 1: Std. fixed overhead rate per day= Budgeted fixed overheads/ Budgeted no. of working days = 45,000/25 = 1,800 per day.

Step 2: Fixed overhead calendar variance

= (Actual no. of working days – Budgeted no. of working days) X SFOR per day

= (26 – 25) X Rs.1,800 = Rs.1,800(F)

REVISED FIXED OVERHEADS CAPACITY VARIANCE

When overheads calendar variance is calculated, Fixed overhead capacity variance is to be calculated as follows :Revised overhead capacity variance = Standard fixed overheads – Revised budgeted overheads= (Actual Hours – Revised budgeted hours) X Standard fixed overhead rate

Or = (AH – RBH) X SFOR

Illustration 6 – Taking the information given in Illustration 5, calculate Revised Fixed overheads capacity variance.

Solution = Revised overheads capacity variance = Standard fixed overheads – Revised Budgeted overheads

= (AH X SFOR) – (RBH X SFOR)

= (33,000 x 1.50) – (31,200 X 1.50) = Rs.2,700(F)