

Chapter 1: Accounting in Action

what is Accounting

- Accounting is an information system, that applies to business.
- **Identifies**
- **Records**
- Communicates the economic events of an organization to interested users.

Accounting is the language of business and information exchange.

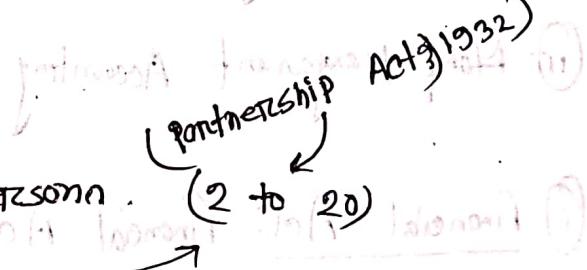
Business Enterprises:

- Proprietorship

Owned by one person.

- Partnership

Owned by two or more persons.



- Corporation / Company (1994)

Organized as a separate legal entity under state

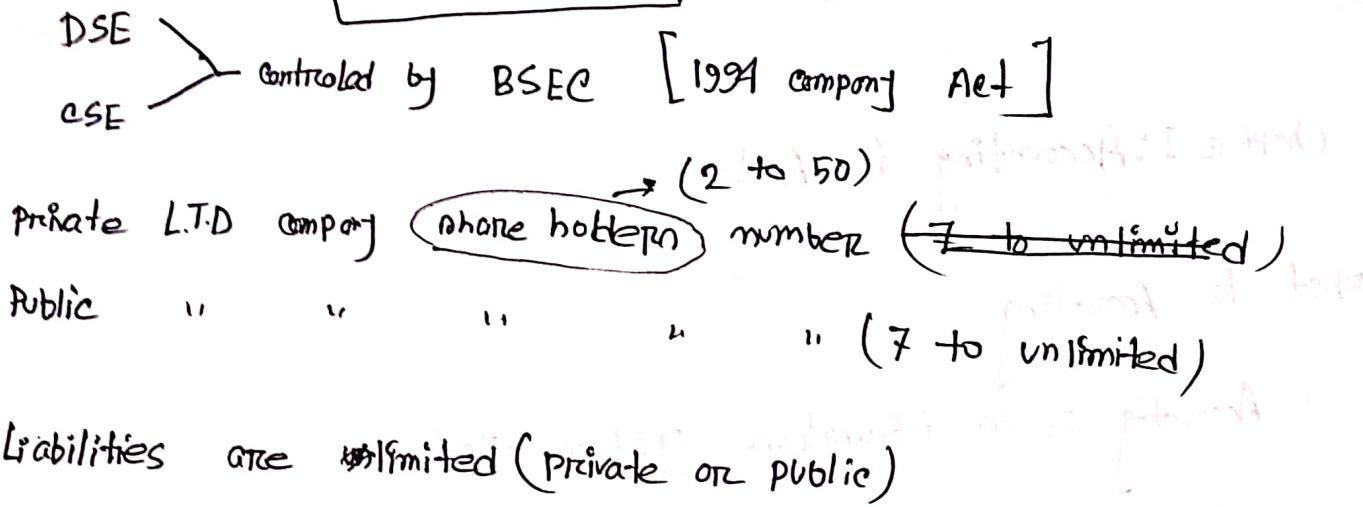
corporation law and having ownership divided into transferable shares of stock.



Healthcare



Public limited company



- अंकराखण्ड - Share from stock ये,

Types of Accounting

- i) Financial Accounting
- ii) Cost Accounting
- iii) Management Accounting
- iv) Financial Act: financial Act. in a process of Identifying

Recording, classifying, summarizing, and preparing financial statements (Statement of Income statement, owners equity statement, and balance sheet) and interpreting the results from the business transaction.

Financial Accounting is based on past.

meaning of

(ii) Cost Accounting: Cost Acct. is responsible only for calculation and control ~~of~~ of cost of production. Cost Acct. applied on

CAT (cost)

CT

Profitability

(iii) Meaning of management Acct: Management accts. in that accounting which provides necessary accounting information to the management authority for taking better decision for the business organization.

X X X X

X X X X

X X X X

X X X X

X X X X

X X X X

X X X X

X X X X

→ (SAC) for standard costing

→ cost accounting

→ cost centre

→ cost centre has responsibility that

→ has relationship with

→ cost for normal selling, that

→ standard costing basis → cost

→ cost for standard selling

→ standard costing basis → cost

→ standard costing basis → cost

→ cost of raw material

fixed costs → profit margin → break even point selling



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2nd chapter: Cost terms and cost classification

Cost sheet:

Particulars	TK	Total TK
Begaining inventory of raw materials	x x x	
+ Purchase of raw materials → Raw materials available for production	x x x	
- Ending inventory of raw materials → Raw materials used/consumed → (RM)	x x x	x x x x
Add Direct Labour Cost (DLC) → of prime cont → মূল পর্যায় - একটি	x x x x	x x x x
Add. Manufacturing overhead →	x x x x	x x x x
Total Manufacturing cost	x x x x	x x x x
Add. Beginning inventory of W-I-P → cost of good manufactured →	x x x x	x x x x
Less: Ending inventory of W-I-P → cost of good manufactured →	x x x x	x x x x

WIP = Work in process

Manufacturing overhead = Indirect অথবা factory এবং মরন কো +
Manufacturing overhead.

2.8
* Martinez company's relevant range of production is 7,500 units to 12,500 units. When it produces and sells 10,000 units, its unit costs are as follows -

	amount per unit
Direct materials	6.00
Direct labour	3.50
Variable manufacturing	



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Cost of good sold

Beginning finished goods → xxx

Add. cost of good manufactured → xxx

Goods available for sale → xxx

less: Ending finished goods → xx

Cost of good sold → xxx

(Exercise 2-11)

1.

Direct materials:

Raw materials inventory, beginning ————— 7000

Add. purchase of raw materials ————— 118,000

Raw materials available for use ————— 125,000

Deduct: Raw materials inventory, ending ————— 15,000

Raw material used in production ————— 110,000

Direct labour ————— 70,000

Manufacturing overhead:

Indirect labour ————— 30,000

Maintenance, factory equipment ————— 6,000

Insurance, factory equipment ————— 800

Rent ,factory facilities	20,000
Supplies	4,200
Depreciation ,factory equipment	19,000
Total overhead costs	80,000
Total manufacturing costs	260,000
Add. Work in process, beginning	10,000
Deduct.	10,000
Deduct. work in progress , ending	5,000
cost of goods manufactured	265,000

2. The cost of goods sold section of Mason company income statement:

Finished goods inventory ,beginning	20,000
Add. cost of goods manufactured	265,000
Goods available for sale	285,000
Deduct. Finished goods inventory ,ending	35,000
cost of goods sold	250,000

Income statement:

Sales revenue	→ XXX
(cost of goods)	→ XXX
<hr/>	
Gross profit	→ XXX
(Selling Expenses)	→ XXX
(Administrative Expenses)	→ XXX
<hr/>	
Net income	→ XXX

Review problem 2:

1.

Particulars	TK	Total TK
Raw material inventory, January 1	90,000	
Add. Purchase of raw materials	750,000	
Deduct. Raw material inventory, December 31	60,000	
* Raw material used/consumed	780,000	
Add. Direct labour cost	150,000	
* Prime cost	930,000	
Add. Manufacturing overhead	640,000	
* Total Manufacturing overhead cost	1570,000	
Add. Work in process inventory, J-1	180,000	
Deduct u u + u D-31	100,000	
* Cost of goods manufactured	165,000	

2

Particulars	TK	Total TK
Finished goods inventory, J-1	260,000	
Add. cost of goods manufactured	1650,000	
* Goods available for sale		1910,000
Deduct. Finished goods inventory, D-31	210,000	
* Cost of goods sold		1700,000



3.

Particulars	TK	total tk
Selling expenses	140,000	
Sales	2500,000	
Deduct. Cost of good sold	1700,000	
* gross profit	800,000	
Administrative expenses	140,000	140,000
Administrative expenses	270,000	410,000
* Net income	390,000	

Page-60 | Exercise (2-5)

Particulars	TK	total tk
Beginning of raw material inventory	60,000	
Add. Purchase of raw material	690,000	
Deduct. Ending raw material	45,000	
* Raw material used	705,000	
Add. Direct labour cost	135,000	
* Prime cost	840,000	
Add. Manufacturing overhead	370,000	
* total manufacturing cost	1210,000	
Add. Beginning WIP	120,000	
Deduct. Ending WIP	130,000	
* Cost of good manufactured	1200,000	

Exercise % (2-11)

~~Cost of good~~

Particulars	TK	Total TK
Purchase of raw material	118,000	
Add. Direct labour cost	70,000	
* Prime cost		188,000
Add. Manufacturing overhead	80,000	
* Total manufacturing cost		268,000
* Cost of goods manufactured		

①

Particulars	TK	Total TK
Raw material in Beginning	7000	
Purchase of raw material	118,000	
deduct. Raw material in End	15,000	
Raw material used		140,000
Add. Direct labour cost	70,000	
* Prime cost		210,000
deduct Add. Manufacturing overhead		80,000
total manufacturing cost		290,000
Add. W-I.P in Beginning	10,000	
deduct, W-I.P in End	5,000	
cost of goods manufactured		295,000



(2)

Particulars	tk	total tk
Beginning stocks of finished goods	20,000	
Add. cost of goods manufactured	295,000	
Stocks available for sale		315,000
Deduct, Ending finished goods	35,000	
Cost of goods sold	280,000	
IT total		

Opportunity cost: Opportunity cost is the potential benefit that is given up when one alternative is selected over another.

Sunk costs: A cost that has already been incurred and that can not be changed by any decision made now or in the future.

page A8

Variable cost:

Administrative cost: All executive, organizational and clerical costs associated with general management

Chapter 5: Cost behavior: Analysis and use.

* Types of fixed cost

* Is variable cost or fixed cost

* Fixed cost and the relevant range

* Mixed cost

* The cost equation is -

$$Y = a + bx$$

In this equation -

Y = The total mixed cost

a = The total fixed cost

b = The variable cost per unit

x = The level of activity.

The high low method -

$$\text{Variable cost} = \text{Slope of the line} = \frac{\text{Rise}}{\text{Run}} = \frac{Y_2 - Y_1}{X_2 - X_1}$$

$$= \frac{\text{Cost at the high activity level} - \text{cost at the low activity level}}{\text{High activity level} - \text{low activity level}}$$



2. The least-square regression method

review Problem -2 (245P)

$$\text{Variable cost } (b) = \frac{N(\sum xy) - (\sum x)(\sum y)}{N(\sum x^2) - (\sum x)^2}$$

$$\text{Fixed cost } (a) = \frac{\sum y - b(\sum x)}{N}$$

The high-low method
 Variable cost = $\frac{\text{Difference in cost}}{\text{Difference in activity}}$

(Exercise 5-3)

1.

High activity level (August)

Occupancy
Days
2406

Electrical
Cost
5148

Low activity level (September)

124

1588

Activity change

2282

3560

Variable cost = change in cost ÷ change in activity

$$= 3560 \div 2282 \text{ occupancy-days}$$

$$= 1.56 \text{ per occupancy-day}$$

Total cost (August) 5148

Variable cost element

(1.56 per occupancy-day × 2406 occupancy-days) 3753

Fixed cost element 1395

2. Electrical costs may reflect seasonal factors other than just the variation in occupancy days. For example, common areas such as the reception area must be lighted for longer periods during the winter than in the summer. This will result in seasonal fluctuations in the fixed electrical cost.



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Additionally, fixed costs will be affected by the number of days in a month. In other words, costs like the costs of lighting common areas are variable with respect to the number of days in the month, but are fixed with respect to how many rooms are occupied during the month.

Other less systematic factors may also affect electrical costs such as the frugality of individual guests.

Some guests will turn off lights when they leave a room, others will not.

E-5-4

1.

High activity level

8

2700

2700

(Average) No hotel
franchise fees added

CAFC (california average franchise fees add)

885

(Average) No hotel
franchise fees added

High activity level (from above) (without)
2700 in costs, becomes 35700 (without) in additional costs
regarding benefit of room rate increase will be about
this additional cost is most related with points about
the room rate increase benefit with a constant increase of guest
room rates.

Exercise 5.7 :

Occupancy	cost
105000	1197000
70000	928000
Change = 35000	259000

Variable cost = $\frac{259000}{35000} = 7.4$

(i.w)

5.14, 5.17,

5.17 e

Element of cost	60,000 unit	90,000 unit
Total cost	174,000	246,000
Utilities (variable)	(48,000)	(72,000)
Supervisory salaries (fixed)	(21,000)	(21,000)
Maintenance cost (Mixed)	105,000	153000

Variable cost per-unit, $\frac{\text{change in cost}}{\text{change in Activity}} = \frac{153000 - 105000}{90,000 - 60,000}$
 $= 1.60 \text{ per unit}$

Fixed cost = Total cost - variable cost
 $= (153,000 - 90,000 \times 1.60)$
 $= 9,000$



Cost formula, $Y = a + bx$

$$Y = 9,000 + 1.60x$$

Cost per unit

Cost per unit = $9,000 + 1.60x$

Cost per unit

Cost per unit = $9,000 + 1.60x$

Chapter 7 - C

Cost-Volume-Profit Relationship

Break Even point (BEP)

BEP means that point, where total revenues and total expenses are equal. That means no profit will there.

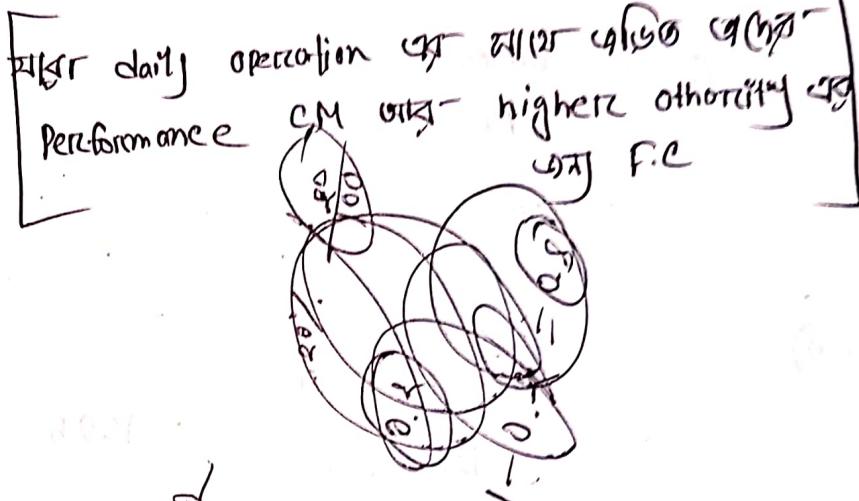
Sales → XXX

\rightarrow V.C (variable cost) → XXα

C.M (contribution margin) → XXX

- F.C (fixed cost) → XXX

EBIT/profit → XXX



1) Equation margin method:

$$\text{Sales} = \text{V.C} + \text{F.C} + \text{Profit}$$

In BEP, Profit = 0

$$\text{Sales} = \text{V.C} + \text{F.C}$$

2) Formula method:

$$\text{BEP (in unit)} = \frac{\text{FC}}{\text{Unit CM}}$$

$$\text{BEP (in dollars)} = \frac{\text{FC}}{\text{CM ratio}}$$



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$$\text{PV} = \text{Profit volume ratio} = \frac{\text{change in profit}}{\text{change in sales}}$$

$$\text{CM ratio} = \frac{\text{CM}}{\text{Sales}} \times 100$$

↓
Contribution margin ratio

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Exercise 6.6 :

Lin Corporation has a single product whose

(1)

$$120Q = 80Q + 50,000 + 10,000 \quad [\text{Sales} = \text{v.c} + \text{f.c} + \text{Profit}]$$

$$\Rightarrow 40Q = 60,000$$

$$\Rightarrow Q = \frac{60,000}{40}$$

$$= 1500$$

(2)

$$\rightarrow \frac{50,000 + 15,000}{120 - 80} = 1625$$

6.7

(1)

$$15Q = 12Q + 4200$$

$\left[\text{Profit} = 0 \right]$

$$3Q = \frac{4200}{3} , Q = 1400$$

(2)

$$\text{BEP}(\$) = \frac{4200}{15 - 12} = 14$$

$$\text{CM Ratio} = \frac{15 - 12}{15} \times 100\% = \frac{\text{Unit contribution margin}}{\text{unit selling price}} \times 100\% = 20\%$$

$$③ x = 8x + 4200 + 0$$

$$\Rightarrow 0 = 8x - 4200$$

$$8x = 4200$$

$$x = 525$$

$$P = 8 \times 525$$

$$P = 4200$$

$$P = 4200 + 2000$$

$$P = 6200$$

$$P = 6200 + 1000$$

$$P = 7200$$

Exercise: Gull's contribution format income statement

	Total	per unit
1. Sales (20,000 units $\times 1.15 = 23,000$ units)	345,000	15.00
Variable expenses	207,000	9.00
Contribution margin	138,000	6
Fixed expenses	70,000	
Net operating income	68,000	
2. Sales (20,000 units $\times 1.25 = 25,000$ units)	337,500	13.50
V. E	225,000	9.0
C. M	112,500	4.50
F. E	70,000	
Net operating income	42,500	



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3. Sales (20,000 units \times 0.95 = 19,000 units)	313,500	16.50
V. E	171,000	9.00
C.M	142,500	7.50
F. E	90,000	
Net operating income	52,500	

4. Sales (20,000 units \times 0.90 = 18,000 units)	302,400	16.80
V. E	172,800	9.60
C.M	129,600	7.20
F. E	70,000	
Net operating income	59,600	

Exercise (6-12)

$$1. \text{BEP} = \frac{\text{F.C}}{\text{Unit C.M}} = \frac{216,000}{18}$$

$$\text{C.M ratio} = \frac{270,000}{450,000} \times 100$$

2. break-even point \rightarrow net income 0 रुपये, तो C.M % 10
 अर्थात् Fixed cost का विनाश रकम 216,000

3. ~~Sales~~ ~~B.E.~~ units = $\frac{216,000 + 90,000}{18}$

~~200,000 - 72,000 = 128,000~~

$\geq 17,000 \text{ mit}$

Demand expectation at different levels

	Total	Unit Price
Sales	450,000	30
V. E	180,000	12
CM	270,600	18
Sales	Total	Unit Price
	510,000	30
V. E	204,000	12
CM	306,000	18
F. E	216,000	
P&L	90,000	

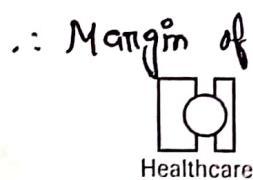
4] Margin of safety:

Actual/Desired sales - B.E. sales

Margin of safety ratio.

$$= \frac{M/S}{Sales} \times 100$$

$M/S \text{ in } (\text{Tk}) = \frac{\text{Profit}}{\text{P.V. ratio}}$



$$\text{Margin of safety in dollars} = \frac{\text{Total sales} - \text{Break-even point sales}}{\text{Total sales}} \times 100$$

$$= 450,000 - 360,000 = 90,000$$

Margin of safety in percentage terms:

$$\text{Margin of safety percentage} = \frac{\text{Margin of safety in dollars}}{\text{Total sales}} \times 100$$

$$= \frac{90,000}{450,000} = 20\%$$

(H.W) 6.13, 6.16, 6.17

6.13

$$1. \text{ Variable expenses} = (\text{Sells} \times \text{CM ratio}) - (\text{Sells} \times \text{CM ratio})$$

$$= 40 - (40 \times 0.3) = 28\$$$

2. a) In BEP, Profit > 0

$$\text{Sells} > \text{VC} + \text{FC} \Rightarrow 16000 \times 40 = 28 \times Q + 180,000$$

$$\Rightarrow Q =$$

$$\text{Profit} = \text{Unit CM} \times Q - \text{FC}$$

$$0 = 12 \times Q - 180,000$$

$$\Rightarrow Q = 15000$$

$$b) \text{Profit} = \text{Unit CM} \times Q - \text{FC}$$

$$\Rightarrow 60,000 = 12 \times Q - 180,000$$

$$\Rightarrow Q = 20,000 \text{ units}$$

In sales dollar = $20,000 \times 40 = 800,000 \$$

6.16

1. Profit = unit CM $\times Q - FC$

$$\Rightarrow 0 = (50 - 30)Q - 108,000$$

$$\Rightarrow Q = 6,000 \text{ stove}$$

2. Price In total sales dollar = $6000 \times 50 = 300,000 \$$



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Chapter - 7

Variable costing : A Tool for Management

Variable costing: Variable costing is a technique that costing technique of accounting.

under variable costing only the following cost element are considered to calculate cost of production.

- i) Direct material cost (DMC)
- ii) Direct Labour cost (DLC)
- iii) Variable manufacturing overhead
- iv) Absorption costing

under Absorption costing only the following cost element are considered to calculate -

- i) Direct material cost.
- ii) Direct labour cost
- iii) Fixed manufacturing overhead

[Page-292, Example]



7.1

Income statement with mkt cost ex.

Management's view of financial statement

is risk of patient cash collection or if patient will not pay for services provided

new business from medical institutions other than hospital
and collection of money by hospital

new business from hospital and new business from hospital
and collection of money by hospital

new business from hospital

7.30 If ending inventory is more than beginning inventory, the profit under absorption costing is higher.

7.30 If ending inventory is more than beginning inventory, the profit under absorption costing is higher.

1. ~~2nd year~~ $560 \times 10 + 1032400 = 1038000$

	1st year	2nd year	3rd year
1. Beginning inventories	200	170	180
Ending	170	180	220
Change in inventories	30	10	40

fixed manufacturing overhead in beginning inventories (560 per unit) —
~~112000~~ ~~95200~~ ~~100800~~

fixed manufacturing overhead in ending inventories (560 per unit) —
~~95200~~ ~~100800~~ ~~123200~~

fixed manufacturing overhead in inventories (560 per unit) —
~~16800~~ ~~5600~~ ~~22400~~

Absorption Costing net operating income
~~1063600~~ ~~1038000~~ ~~1018800~~



2. Because absorption costing net operating income was greater than variable costing net operating income in year 4, inventories must have increased during the year and hence fixed manufacturing overhead was deferred in inventories. The amount of the deferral is the difference between the two net operating incomes or $\$10124 - \$9844 = \$2780$

7.65

	Variable costing	Absorption costing
Direct materials	9	5
Direct labour	9	9

Operating income \$12,000

41-W
7.7, 7.8, 7.11
7.12



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Chapter - 9
Profit Planning

Types of budget :

1. Sales forecasting ;
 2. Sales budget
 3. Production budget
 4. Direct materials budget
 5. Direct labour budget
 6. Manufacturing overhead budget
 7. Administrative overhead budget
 8. Selling and distribution overhead budget
- All of the above budget are called functional budget

9. Financial budget \rightarrow cash budget
10. Budgeted income statement
11. Budgeted balance sheet

* $\boxed{\text{functional budget} + \text{financial budget} = \text{master budget}}$

* Zero based budget \rightarrow if a company is new, without any previous experience, their budget is called zero based budget.



Budget %

Expenditure
Budget

Budgeted Profit

Budget Performance

Budget Actual

Budget Variance

Advantages of budget.

For Income statement: Income statement shows financial condition.

Balance sheet: Balance sheet shows the financial statement
(asset and liabilities)

Page 394
page 396 (1-6) Exam etc Jomno
account receivable: তুল্য পরিমাণের
পদ্ধতি,

Exercise - 9.1

Budgeted Income Statement
Budgeted Profit

Budgeted Profit

Budgeted Profit

Budgeted Income Statement
Budgeted Profit

Exercise: 9.2

* Production budget formula = $\text{closing sales} + \text{inventory}$ - opening inventory .

Direct material budget formula -

* Required production unit + closing inventory - opening inventory

9.4: Labour budget

9.5: Manufacturing overhead



- Exercise - 9.6'.
- Selling and Administrative Expenses

6.9

next 29.03.2022
Bugs - chapter 6, 9

9月 (9.1 - 9.7)



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	<u>1st quarter</u>	<u>2nd Q.</u>	<u>3rd Q.</u>	<u>4th Q.</u>	<u>Year</u>
Cash balance beginning	20,000	10,000	35,800	25800	20,000
Total cash receipts	180,000	330,000	210,000	230,000	950,000
Total cash available	200,000	340,000	215,000	255,800	970,800
Less total cash distribution	260,000	230,000	220,000	210,000	950,000
Excess (deficiency) of cash available over disbursements	60,000	110,000	25,800	15800	20,000
Financing:					
Borrowing (at beginning of quarters)	70,000				70,000
Repayments (at ends of quarters)		70,000			70,000
Interest		42000			4200
Total financing	70,000	74,200			4200
Cash balance, ending	10,000	35800	25800	15800	15800

* Since the deficiency of cash available over disbursements ~~of~~

is 60,000, the company must borrow 70,000 to maintain
ending the desired ending cash balance of 10,000

$$70,000 \times 3\% = 4200$$

Cash budget: Cash budget is that budget where we show

g.11, g.12,
g.13, g.14, g.16
g.17

Chapter 10

Standard ~~costing~~ control and operating performance
measures

⇒ Standard cost এর ব্যাখ্যা দারিদ্র্যসন্তোষ -

- ⇒ Price standard cost and Actual cost এর - পার্থক্য variance
Actual cost > standard cost → Adverse
Actual cost < standard cost → favorable

* varie

What types of variance?

- i) Materials price variance
- ii) Materials quantity variance

formula, material price variance = $(AQ \times AP) - (AQ \times SP)$

↓ ↓
Actual Actual
quantity price
 ↓
 Standard
 price

$$= AQ(AP - SP)$$

material price variance = $(AQ \times SP) - (SQ \times SP)$

= $SP(AQ - SQ)$



iii Labour Rate variance = $(AH \times AR) - (AH \times SR)$

↓ ↓ ↓
 Actual Actual Standard
 hours rate rate

$$= AH (AR - SR)$$

iv Labour efficiency variance = $(AH \times SR) - (SH \times SR)$

↓ ↓ ↓
 Actual Standard Standard
 hours rate hours

$$= SR (AH - SH)$$

v Variable overhead rate variance = $(AH \times AR) - (AH \times SR)$

↓ ↓ ↓
 Actual Actual Standard
 hour rate rate

vi Variable overhead efficiency variance = $(AH \times SR) - (SH \times SR)$

↓ ↓ ↓
 Actual Standard Standard
 hour rate hours

allowed for
Actual output

8. w) (11.1 - 11.9)