

Q.NO. 1

Hypothetical Ltd furnished the following from the cost records for the first quarter of the current year:

| | |
|---|-------|
| NORMAL PRODUCTION (IN UNITS) | 1,000 |
| ACTUAL PRODUCTION (UNITS) | 1,100 |
| ACTUAL OVERHEADS PER QUARTER AT NORMAL PRODUCTION | 4,000 |
| OTHER EXPENSES PER QUARTER | 300 |
| STANDARD FIXED OVERHEAD RATE PER UNIT | 4 |
| VARIABLE OSTS PER UNIT | 6 |
| SALES VOULUME (SELLING PRICE IS RS.14) | NIL |

Prepare the income statement under Absorption Costing.

ANS.

INCOME STATEMENT (ABSORPTION COSTING)

| PARTICULARS | AMOUNT |
|---|--------------|
| SALES VALUE | NIL |
| LESS: | |
| TOTAL COST OF MANUFACTURING: | |
| VARIABLE COSTS (1,100 X 6) = | 6,600 |
| FIXED OVERHEADS (1,100 X 4) = | <u>4,400</u> |
| | 11,000 |
| LESS: COST OF INVENTORY AT THE END OF THE YEAR (1,100 X 10) = 11,000 | NIL |
| COST OF GOODS MANUFACTURED AND SOLD | NIL |
| GROSS MARGIN (UNADJUSTED) | NIL |
| CAPACITY VARIANCE (FAVOURABLE) OVER ABSORBED 100X4 | 400 |
| GROSS MARGIN ADJUSTED | 400 |
| LESS: OTHER EXPENSES | 300 |
| NET INCOME BEFORE TAXES | 100 |

Q.NO.2

Hypothetical Ltd furnished the following from the cost records for the first quarter of the current year:

| | |
|---|-------|
| NORMAL PRODUCTION (IN UNITS) | 1,000 |
| ACTUAL PRODUCTION (UNITS) | 1,100 |
| ACTUAL OVERHEADS PER QUARTER AT NORMAL PRODUCTION | 4,000 |
| OTHER EXPENSES PER QUARTER | 300 |
| STANDARD FIXED OVERHEAD RATE PER UNIT | 4 |
| VARIABLE OSTS PER UNIT | 6 |
| SALES VOULUME (SELLING PRICE IS RS.14) | NIL |

Prepare the income statement under vARIABLE Costing.

ANS.

INCOME STATEMENT (VARIABLE COSTING)

| PARTICULARS | AMOUNT |
|---|--------|
| SALES VALUE | NIL |
| LESS: | |
| VARIABLE COSTS (1,100 X 6) = | 6,600 |
| LESS: COST OF INVENTORY AT THE END OF THE YEAR (1,100 X 6) = 6,600 | NIL |
| COST OF GOODS MANUFACTURED AND SOLD | NIL |
| CONTRIBUTION | NIL |
| LESS: FIXED COSTS | |
| FIXED OVERHEADS = 4,000 | |
| OTHER EXPENSES = 300 | 4,300 |
| NET INCOME BEFORE TAXES (LOSS) | 4,300 |

Q.NO. 3

Hypothetical Ltd furnished the following information for its three different periods:

| PARTICULARS | YEAR 1 | YEAR 2 | YEAR 3 |
|-------------------|--------|--------|--------|
| PRODUCTION(UNITS) | 10,000 | 10,000 | 10,000 |
| SALES (UNITS) | 10,000 | 5,000 | 15,000 |

Sales price per unit Rs. 12

Variable Cost per unit Rs. 6

Fixed Cost per year (at normal capacity of 10,000 units) Rs. 40,000

Standard Fixed overhead Rate : Rs. 4 per unit

Show the profit under Absorption Costing in different years.

ANS.

| PARTICULARS | YEAR 1 | YEAR 2 | YEAR 3 |
|--|----------|----------|----------|
| SALES (10,000 X 12),(5000X 12), (15000 X12) | 1,20,000 | 60,000 | 1,80,000 |
| LESS: COST OF GOODS MANUFACTURED | | | |
| VARIABLE COST (10,000 X 6)= 60,000 | | | |
| FIXED COSTS (10,000 X 4) = 40,000 | | | |
| COST OF GOODS MANUFACTURED AND SOLD | 1,00,000 | 1,00,000 | 1,00,000 |
| LESS: COST OF INVENTORY AT THE END OF THE YEAR | | | |
| 5000 X 10 = 50,000 | | 50,000 | |
| PLUS: COST OF INVENTORY IN THE YEAR'S BEGINNING | | | |
| 5,000 X 10 | | | 50,000 |
| COST OF GOODS MANUFACTURED AND SOLD | | 50,000 | 1,50,000 |
| GROSS MARGIN | 20,000 | 10,000 | 30,000 |

| | | | |
|-------------------------|--------|--------|--------|
| CONTRIBUTION | - | - | - |
| LESS: FIXED COSTS | - | - | - |
| NET INCOME BEFORE TAXES | 20,000 | 10,000 | 30,000 |

Q.NO. 4

Hypothetical Ltd furnished the following information for its three different periods:

| PARTICULARS | YEAR 1 | YEAR 2 | YEAR 3 |
|-------------------|--------|--------|--------|
| PRODUCTION(UNITS) | 10,000 | 10,000 | 10,000 |
| SALES (UNITS) | 10,000 | 5,000 | 15,000 |

Sales price per unit Rs. 12

Variable Cost per unit Rs. 6

Fixed Cost per year (at normal capacity of 10,000 units) Rs. 40,000

Standard Fixed overhead Rate : Rs. 4 per unit

Show the profit under Variable Costing in different years.

ANS.

| PARTICULARS | YEAR 1 | YEAR 2 | YEAR 3 |
|--|----------|----------|----------|
| SALES (10,000 X 12),(5000X 12), (15000 X12) | 1,20,000 | 60,000 | 1,80,000 |
| LESS: COST OF GOODS MANUFACTURED VARIABLE COST (10,000 X 6)= 60,000 | 60,000 | 60,000 | 60,000 |
| COST OF GOODS MANUFACTURED AND SOLD | 60,000 | 60,000 | 1,20,000 |
| LESS: COST OF INVENTORY AT THE END OF THE YEAR 5000 X 6 = 50,000 | | 30,000 | |
| Less: COST OF INVENTORY IN THE YEAR'S BEGINNING 5,000 X 10 | | | 30,000 |
| COST OF GOODS MANUFACTURED AND SOLD | | 30,000 | 90,000 |
| GROSS MARGIN | - | - | - |
| CONTRIBUTION | 60,000 | 30,000 | 90,000 |
| LESS: FIXED COSTS | 40,000 | 40,000 | 40,000 |
| NET INCOME BEFORE TAXES | 20,000 | (10,000) | 50,000 |

Q.NO.5

ABC Ltd. Had the following relevant Information for years 1 and 2:

| | |
|----------------------------------|----|
| STANDARD VARIABLE COSTS PER UNIT | 6 |
| SALES PRICE PER UNIT | 10 |

| | |
|--|----------------------|
| FIXED MANUFACTURING OVERHEAD (AT NORMAL CAPACITY OF 1,50,000 UNITS) | 3,00,000 |
| SELLING AND ADMINISTRATIVE EXPENSES FIXED VARIABLE (PER CENT OF SALES) | 1,30,000 5 |
| PRODUCTION VOLUME UNITS YEAR 1 YEAR 2 | 1,70,000 1,40,000 |
| SALES VOLUME YEAR 1 YEAR 2 | 1,40,000 1,60,000 |

There was no inventory at the beginning of year 1. Income Tax rate is 35%. Prepare income statements for the two years under absorption costing.

ANS.

| PARTICULARS | YEAR 1 | YEAR 2 |
|---|-----------------------|----------------------|
| NUMBER OF UNITS PRODUCED | 1,70,000 | 1,40,000 |
| NUMBER OF UNITS SOLD | 1,40,000 | 1,60,000 |
| SALES REVENUE | 14,00,000 | 16,00,000 |
| LESS: COST OF MANUFACTURING STANDARD VARIABLE COST 6 PER UNIT FIXED COST 2 PER UNIT | 10,20,000 3,40,000 | 8,40,000 2,80,000 |
| TOTAL STANDARD COST OF MANUFACTURING 8 PER UNIT | 13,60,000 | 11,20,000 |
| PLUS: BEGINNING COST OF INVENTORY | - | 2,40,000 |
| LESS: ENDING COST OF INVENTORY | (2,40,000) | (80,000) |
| COST OF GOODS MANUFACTURED AND SOLD AT STANDARD ABSORPTION COSTING | 11,20,000 | 12,80,000 |
| GROSS MARGIN MANUFACTURING (UNADJUSTED) | 2,80,000 | 3,20,000 |
| CAPACITY VARIANCE | 40,000 (F) | 20,000 (A) |
| GROSS MARGIN ADJUSTED | 3,20,000 | 3,00,000 |
| LESS: NON PRODUCTION COSTS: SELLING AND ADMINISTRATIVE EXPENSES | 2,00,000 | 2,10,000 |
| NET INCOME BEFORE TAXES | 1,20,000 | 90,000 |
| LESS: INCOME TAX 35% | 42,000 | 31,500 |
| NET INCOME AFTER TAXES | 78,000 | 58,500 |

Q.NO.6

ABC Ltd. Had the following relevant Information for years 1 and 2:

| | |
|---|----------|
| STANDARD VARIABLE COSTS PER UNIT | 6 |
| SALES PRICE PER UNIT | 10 |
| FIXED MANUFACTURING OVERHEAD (AT NORMAL CAPACITY OF 1,50,000 UNITS) | 3,00,000 |
| SELLING AND ADMINISTRATIVE EXPENSES FIXED | 1,30,000 |
| VARIABLE (PER CENT OF SALES) | 5 |
| PRODUCTION VOLUME UNITS | |
| YEAR 1 | 1,70,000 |
| YEAR 2 | 1,40,000 |
| SALES VOLUME | |
| YEAR 1 | 1,40,000 |
| YEAR 2 | 1,60,000 |

There was no inventory at the beginning of year 1. Income Tax rate is 35%. Prepare income statements for the two years under variable costing.

ANS. 6

| PARTICULARS | YEAR 1 | YEAR 2 |
|---|----------------------|----------------------|
| NUMBER OF UNITS PRODUCED | 1,70,000 | 1,40,000 |
| NUMBER OF UNITS SOLD | 1,40,000 | 1,60,000 |
| SALES REVENUE | 14,00,000 | 16,00,000 |
| LESS: COST OF MANUFACTURING STANDARD VARIABLE COST 6 PER UNIT + COST OF INVENTORY AT STANDARD COST BEGINNING | 10,20,000 NIL | 8,40,000 1,80,000 |
| (-) COST OF INVENTORY AT STANDARD COST ENDING | (1,80,000) | (60,000) |
| TOTAL STANDARD COST OF MANUFACTURING AND SOLD @ OF 6 PER UNIT SOLD | 8,40,000 | 9,60,000 |
| CONTRIBUTION (MANUFACTURING) | 5,60,000 | 6,40,000 |
| LESS: VARIABLE NON PRODUCTION COSTS SELLING AND DISTRIBUTION EXPENSES | 70,000 | 80,000 |
| CONTRIBUTION FINAL | 4,90,000 | 5,60,000 |
| LESS: FIXED COSTS FIXED OVERHEADS SELLING AND ADMINISTRATIVE EXPENSES | 3,00,000 1,30,000 | 3,00,000 1,30,000 |
| NET INCOME BEFORE TAXES | 60,000 | 1,30,000 |

| | | |
|------------------------|--------|--------|
| LESS: TAXES @ 35% | 21,000 | 45,500 |
| NET INCOME AFTER TAXES | 39,000 | 84,500 |

Q.N. 7 Braham enterprises manufactures tires for the Formula I motor racing circuit. For August 2009, it budgeted to manufacture and sell 3,000 tires at a variable cost of \$ 74 per tire and total fixed costs of \$ 54,000. The budgeted selling price was \$ 110 per tire. Actual results in August 2009 were 2,800 tires manufactured and sold at a selling price of \$ 112 per tire. The actual total variable costs were \$2,29,600 and the actual total fixed costs were \$ 50,000.

1. Prepare a performance report that uses a flexible budget and a static budget.
2. Comment on the results in requirement 1.

Flexible budget.

| | Actual Results (1) | Flexible- Budget Variances (2) = (1) – (3) | Flexible Budget (3) | Sales- Volume Variances (4) = (3) – (5) | Static Budget (5) |
|---------------------|-----------------------------|--|-----------------------------|--|-----------------------------|
| Units sold | <u>2,800</u> ^G | <u>0</u> | <u>2,800</u> | <u>200 U</u> | <u>3,000</u> ^G |
| Revenues | \$313,600 ^a | \$ 5,600 F | \$ 308,000 ^b | \$22,000 U | \$330,000 ^c |
| Variable costs | <u>229,600</u> ^d | <u>22,400 U</u> | <u>207,200</u> ^e | <u>14,800 F</u> | <u>222,000</u> ^f |
| Contribution margin | 84,000 | 16,800 U | 100,800 | 7,200 U | 108,000 |
| Fixed costs | <u>50,000</u> ^G | <u>4,000 F</u> | <u>54,000</u> ^G | <u>0</u> | <u>54,000</u> ^G |
| Operating income | <u>\$ 34,000</u> | <u>\$12,800 U</u> | <u>\$ 46,800</u> | <u>\$ 7,200 U</u> | <u>\$ 54,000</u> |
| | | ↑ | ↑ | ↑ | |
| | | \$12,800 U | | \$ 7,200 U | |
| | | Total flexible-budget variance | | Total sales-volume variance | |
| | | ↑ | | | |
| | | \$20,000 U | | | |
| | | Total static-budget variance | | | |

a $\$112 \times 2,800 = \$313,600$

b $\$110 \times 2,800 = \$308,000$

c $\$110 \times 3,000 = \$330,000$

d Given. Unit variable cost = $\$229,600 \div 2,800 = \82

per tire e $\$74 \times 2,800 = \$207,200$

f $\$74 \times 3,000 = \$222,000$

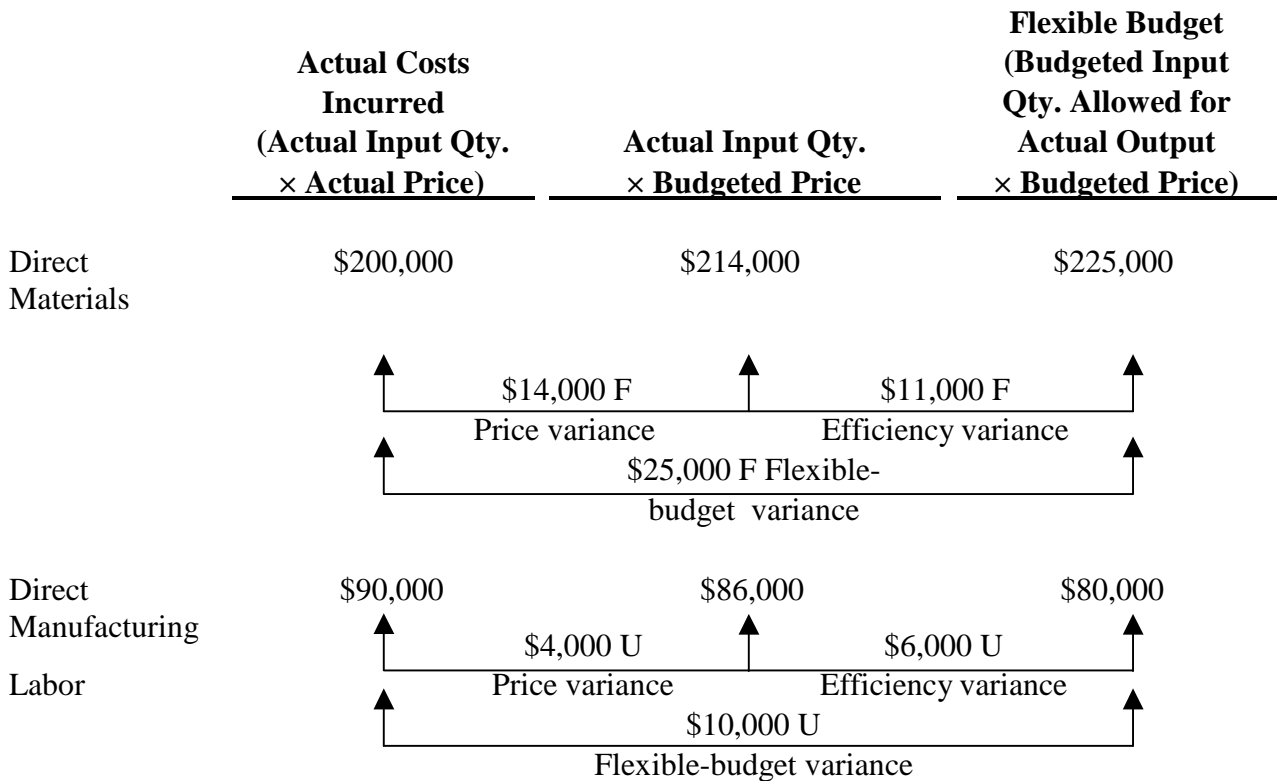
The total static-budget variance in operating income is $\$20,000$ U. There is both an unfavorable total flexible-budget variance ($\$12,800$) and an unfavorable sales-volume variance ($\$7,200$).

The unfavorable sales-volume variance arises solely because actual units manufactured and sold were 200 less than the budgeted 3,000 units. The unfavorable flexible-budget variance of $\$12,800$ in operating income is due primarily to the $\$8$ increase in unit variable costs. This increase in unit variable costs is only partially offset by the $\$2$ increase in unit selling price and the $\$4,000$ decrease in fixed costs.

Q. No. 8 Consider the following data collected for Great Homes Incorporation:

| PARTICULARS | DIRECT MATERIALS | DIRECT LABOUR |
|---|------------------|---------------|
| Cost Incurred: Actual Output X Actual Price | 2,00,000 | 90,000 |
| Actual Input X Standard Price | 2,14,000 | 86,000 |
| Standard Input allowed for actual output X Standard Price | 2,25,000 | 80,000 |

ANS. Materials and manufacturing labor variances.



Q.No. 9. Bank Management Printers Inc. produces Luxury check books with three checks and stubs per page. Each check books is designed for an individual customer and is ordered through the customer's bank. The company's operating budget for September, 2009 included these data:

| | |
|--|------------|
| Number of Check books | 15,000 |
| Selling price per book | \$ 20 |
| Variable Cost per book | \$ 8 |
| Fixed Costs for the month | \$1,45,000 |
| The actual results for the September 2009 were | |
| Number of Check books produced and sold | 12,000 |
| Selling price per book | \$ 21 |
| Variable Cost per book | \$ 7 |
| Fixed Costs for the month | \$1,50,000 |

1. Prepare a static budget based variance analysis of the September performance.
2. Prepare a flexible budget based variance analysis of the September performance.

ANS. Flexible budget preparation and analysis.

1. Variance Analysis for Bank Management Printers for September 2004

Level 1 Analysis

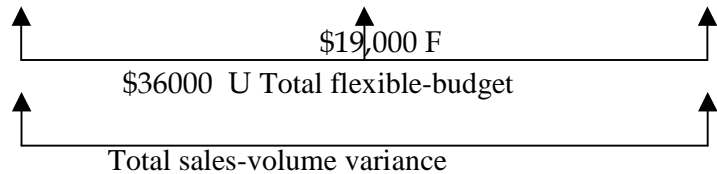
| | Actual Results (1) | Static-Budget Variances (2) = (1) – (3) | Static Budget (3) |
|---------------------|-----------------------------------|--|----------------------------------|
| Units sold | <u>12,000</u> | <u>3,000 U</u> | <u>15,000</u> |
| Revenue | \$252,000 ^a | \$ 48,000 U | \$300,000 ^c |
| Variable costs | <u>84,000^d</u> | <u>36,000 F</u> | <u>120,000^f</u> |
| Contribution margin | 168,000 | 12,000 U | 180,000 |
| Fixed costs | <u>150,000</u> | <u>5,000 U</u> | <u>145,000</u> |
| Operating income | <u>\$ 18,000</u> | <u>\$ 17,000 U</u> | <u>\$ 35,000</u> |

Total static-budget variance

Level 2 Analysis

| | Actual Results (1) | Flexible- Budget Variances (2) = (1) – (3) | Flexible Budget (3) | Sales Volume Variances (4) = (3) – (5) | Static Budget (5) |
|----------------|-----------------------------------|---|------------------------------------|---|----------------------------------|
| Units sold | <u>12,000</u> | <u>0</u> | <u>12,000</u> | <u>3,000 U</u> | <u>15,000</u> |
| Revenue | \$252,000 ^a | \$12,000 F | \$240,000 | | \$300,000 |
| Variable costs | <u>84,000^d</u> | <u>12,000 F</u> | <u>96,000^e</u> | <u>24,000 F</u> | <u>120,000^f</u> |
| | ^b | | \$60,000 U ^c | | |

| | | | | | |
|---------------------|------------------|-------------------|-------------------|-------------------|------------------|
| Contribution margin | 168,000 | 24,000 F | 144,000 | 36,000 U | 180,000 |
| Fixed costs | <u>150,000</u> | <u>5,000 U</u> | <u>145,000</u> | <u>0</u> | <u>145,000</u> |
| Operating income | <u>\$ 18,000</u> | <u>\$19,000 F</u> | <u>\$ (1,000)</u> | <u>\$36,000 U</u> | <u>\$ 35,000</u> |



Q.NO. 10

The Hind General Corporation Ltd. Produces a product which has the following costs:

Variable Manufacturing Costs: 4 per unit

Fixed Manufacturing Costs 2,00,000 per year

The Normal Capacity is set at 2,00,000 units

There are no work in progress inventories.

Last year the company produced 2,00,000 units and sold 90 per cent at a price of 7 per unit. In the current year, the company produced 2,10,000 units and sold 2,15,000 units at the same price. Prepare compare statement for both the years based on absorption costing.

ANS.

Income Statement for the Previous Year and Current Year of Hind General Corporation Ltd.

| PARTICULARS | PREVIOUS YEAR | CURRENT YEAR |
|---|---------------|--------------|
| PRODUCTION UNITS | 2,00,000 | 2,10,000 |
| SALES (UNITS) | 1,80,000 | 2,15,000 |
| OPENING INVENTORY (UNITS) | - | 20,000 |
| CLOSING INVENTORY (UNITS) | 20,000 | 15,000 |
| SALES REVENUE | 12,60,000 | 15,05,000 |
| LESS: PRODUCTION COSTS | | |
| VARIABLE MANUFACTURING COST @4 PER UNIT | 8,00,000 | 8,40,000 |
| FIXED MANUFACTURING COST @ 1 PER UNIT 200000/200000 = 1 PER UNIT | 2,00,000 | 2,10,000 |
| TOTAL PRODUCTION COST | 10,00,000 | 10,50,000 |
| ADD: COST OF INVENTORY AT THE BEGINNING OF THE YEAR @ 5 PER UNIT | - | 1,00,000 |
| LESS: COST OF INVENTORY AT THE END OF THE YEAR @ 5 PER UNIT | (1,00,000) | (75,000) |

| | | |
|--|----------|-----------|
| COST OF GOODS SOLD | 9,00,000 | 10,75,000 |
| GROSS MARGIN (UNADJUSTED) | 3,60,000 | 4,30,000 |
| ADD: FAVOURABLE CAPACITY VARIANCE IN THE CURRENT YEAR (10,000 X 1) | - | 10,000 |
| GROSS MARGIN (ADJUSTED) NET INCOME | 3,60,000 | 4,40,000 |

Variance \$17,000 U Total Static-budget variance

a $12,000 \times \$21 = \$252,000$

b $12,000 \times \$20 = \$240,000$

c $15,000 \times \$20 = \$300,000$

d $12,000 \times \$7 = \$84,000$

e $12,000 \times \$8 = \$96,000$

f $15,000 \times \$8 = \$120,000$

