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# Corporate Income Tax Calculation

## Step 1: Given Information and Introduction

Given data:

- Firm’s sales last year: $1,106,000
- Cost of goods sold: $650,000
- Operating Expenses: $103,000
- Interest: $201,000
- Dividend Income: $40,000
- Depreciation Expense: $49,000
- Dividends paid: $13,000

The goal is to compute the tax liability, the firm's average tax rate, and the marginal tax rate.

**Explanation:**

The task involves calculating the company’s taxable income by considering all revenues and deducting the related expenses. The corporate tax rates provided will help in determining the tax liability.

## Step 2: Calculate Net Operating Income Before Taxes

Net Sales: $1,106,000

Cost of Goods Sold: $650,000

Operating Expenses: $103,000

Net Operating Income = Net Sales - Cost of Goods Sold - Operating Expenses

Net Operating Income = $1,106,000 - $650,000 - $103,000

Net Operating Income = $353,000

**Explanation:**

The net operating income is obtained by subtracting the cost of goods sold and the operating expenses from the net sales.

**Supporting Statement:**

The net operating income is the firm's earnings from its normal business operations, excluding non-operational income and expenses.

## Step 3: Calculate the Taxable Income

Interest Payment: $201,000

Dividend Income: $40,000

Depreciation Expense: $49,000

Taxable Income = Net Operating Income - Interest Payment + Dividend Income - Depreciation Expense

Taxable Income = $353,000 - $201,000 + $40,000 - $49,000

Taxable Income = $143,000

**Explanation:**

Taxable income is calculated by subtracting interest payment and depreciation expense from the net operating income and adding the dividend income.

**Supporting Statement:**

Taxable income is the amount of income that is used to determine how much the firm owes in taxes.

## Step 4: Apply Corporate Tax Rates
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Using the provided marginal tax rates table:

- \$0 - \$50,000: 15%
- \$50,001 - \$75,000: 25%
- \$75,001 - \$100,000: 34%
- \$100,001 - \$335,000: 39%

Tax for \$0-\$50,000 = 0.15 × \$50,000 = \$7,500

Tax for \$50,001-\$75,000 = 0.25 × (\$75,000 - \$50,000) = 0.25 × \$25,000 = \$6,250

Tax for \$75,001-\$100,000 = 0.34 × (\$100,000 - \$75,000) = 0.34 × \$25,000 = \$8,500

Tax for \$100,001-\$143,000 = 0.39 × (\$143,000 - \$100,000) = 0.39 × \$43,000 = \$16,770

Total tax liability is the sum of the taxes calculated for each income range:

Total Tax Liability = \$7,500 + \$6,250 + \$8,500 + \$16,770

Total Tax Liability = \$39,020

Explanation:

The total tax liability is determined by applying the appropriate tax rate to each portion of the taxable income according to the brackets provided.

Supporting Statement:

Total corporate tax is calculated based on the cumulative amount of taxes payable across different income brackets.

Step 5: Calculate Average and Marginal Tax Rates

Average Tax Rate = Total Tax Liability / Taxable Income

Average Tax Rate = \$39,020 / \$143,000 ≈ 0.273 or 27.3%

The marginal tax rate for taxable income at \$143,000 falls within the \$100,001 - \$335,000 range at 39%.

Explanation:

The average tax rate is the ratio of total tax liability to taxable income. The marginal tax rate indicates the tax rate on the next dollar earned.

Supporting Statement:

The average tax rate provides an overall sense of the firm's tax burden, while the marginal tax rate impacts financial decisions related to earning additional income.

Final Solution:

Total Tax Liability: \$39,020

Average Tax Rate: 27.3%

Marginal Tax Rate: 39%

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