**FINANCIAL ANALYSIS**

**FOR BEGINNERS**

***155 Calculus exercises you should practice and master before you become an expert in Financial Analysis***

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The author has 25 years of experience in the banking and investment industry. He has a Master of Business Administration (MBA) and a Master of Finance. He is Industrial Engineer and he also has studies in Actuarial Science and Computer Science.

This book is intended for all Finance Baccalaureate or Finance Master's degree students. You will find 155 challenging calculus questions.

It contains a wide variety of exercises, covering 100% of all the topics included in Financial Analysis courses. The level of difficulty in this book is suitable for those who are studying Financial Analysis for the first time and who need to practice.

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# CHAPTER 1 - UNDERSTANDING INCOME STATEMENT

**1.**-Delta, Inc.'s financial information included the following for its year ended December 31, 2019:

* 160,000 shares of common stock were outstanding for the entire year.
* 18,000 shares of 10%, $100 par value cumulative preferred stock were outstanding for the entire year.
* Common stock dividends paid during the current year were $240,000.
* All preferred stock dividends were paid for the current year.
* Net income was $720,000.

Basic earnings per share for Delta, Inc. for the year ended December 31, 2019 are *closest to:*

A. $4.50.

B. $2.81.

C. $3.38.

**2.**-Selected information from Gamma Corp.'s financial activities for the year is as follows:

* Net income was $7,650,000.
* 1,100,000 shares of common stock were outstanding on January 1.
* The average market price per share was $62.
* Dividends were paid during the year. The tax rate was 40%.
* 10,000 shares of 6% $1,000 par value preferred shares convertible into common shares at a rate of 20 common shares for each preferred share were outstanding for the entire year.
* 70,000 options, which allow the holder to purchase 10 shares of common stock at an exercise price of $50 per common share, were outstanding the entire year.

Gamma Corp.'s diluted earnings per share (EPS) was *closest* to:

A. $4.91.

B. $5.32.

C. $5.87.

**3.-** The Gamma Company had net income of $1 million for the period. There were 1 million shares of widget common stock outstanding for the entire period. If there are 100,000 options outstanding with an exercise price of $40, what is the diluted earnings per share for Gamma common stock if the average price per share over the period was $50?

A. $1.00.

B. $0.98.

C. $0.99.

**4.-**The Beta Company had 5 million shares outstanding on January 1. On February 15 the board of directors approved a 3:2 stock split, effective April 1. What is the weighted average number of shares outstanding for the Bet Company for year-end?

A. 6,875,000 shares.

B. 7,500,000 shares.

C. 5,625,000 shares.

**5**.-A company has the following sequence of events regarding their stock:

* One million shares outstanding at the beginning of the year.
* On June 30th, they declared and issued a 10% stock dividend.
* On September 30th, they sold 400,000 shares of common stock at par.

Basic earnings per share at year-end will be computed on how many shares?

A. 1,100,000.

B. 1,000,000.

C. 1,200,000.

**6.-** On December 31, 2018, Lambda Corporation had 350,000 shares of common stock outstanding. On September 1, 2019, an additional 150,000 shares of common stock were issued. In addition, Lambda had $10 million of 8% convertible bonds outstanding at December 31, 2018, which are convertible into 200,000 shares of common stock. Net income for 2019 was $3 million. Assuming an income tax rate of 40%, what amount should be reported as the diluted earnings per share for 2019?

A. $5.00.

B. $5.80.

C. $6.00.

**7.**-Alpha Construction always uses the percentage of completion method of recognizing revenue. During 2019 Alpha signs a contract in the amount of $10 million with the following data available:

|  |  |
| --- | --- |
| Cost incurred to date | $2,200,000 |
| Billings to date | $2,100,000 |
| Cash Collected | $1,700,000 |
| Total cost of project | $8,800,000 |

How much gross profit should Alpha Construction recognize for 2019?

A. -$450,000

B. $300,000

C. $200,000

**8.-**Assume that the exercise price of an option is $10, and the average market price of the stock is $13. Assuming 999 options are outstanding during the entire year, what is the number of shares to be added to the denominator of the diluted earnings per share (EPS)?

A. 231.

B. 999.

C. 768.

**9.-**Assume that the exercise price of an option is $11, and the average market price of the stock is $16. Assuming 1,039 options are outstanding during the entire year, what is the number of shares to be added to the denominator of the Diluted EPS?

A. 325.

B. 714.

C. 1039.

**10.**-Alpha Company's capital structure was as follows:

|  |  |  |
| --- | --- | --- |
|  | **Dec 31, 2019** | **Dec 31, 2018** |
| Outstanding shares of stock | 200,000 | 200,000 |
| Convertible preferred | 5,000 | 5,000 |
| 6% Convertible Bonds | $500,000 | $500,000 |

During 2019, Alpha Company paid dividends of $2.00 per share on its preferred stock.

* The preferred shares are convertible into 10,000 shares of common stock.
* The 6% bonds are convertible into 15,000 shares of common stock.
* Net income for 2019 was $400,000.
* Assume that income tax rate is 40%.

Alpha's basic and diluted earnings per share for 2019 are

Basic EPS Diluted EPS

A. $1.95 $1,95

B. $1,95 $1.86

C. $1.80 $1.86

**11.-**An Analyst has gathered the following information about Delta, Inc., for the year:

* Reported net income of $30,000.
* 5,000 shares of common stock and 2,000 shares of 8%, $90 par preferred stock outstanding during the whole year.
* During the year, Delta issued at par, $60,000 of 6.0% convertible bonds, with each of the 60 bonds convertible into 110 shares of the Delta common stock.

If Delta's effective tax rate is 40%, what will Delta report for diluted earnings per share (EPS)?

A. $1.66.

B. $2.36.

C. $1.53.

**12.-**The Emmanuel church is building a new church for $2 million on land acquired several years ago. The contractor estimates the cost at $1.3 million and the project is to be completed over a 2-year period with the payments split evenly between the 2 years. During the first year, the total costs incurred were $700,000. During the second year the contractor experienced cost overruns and costs incurred were $1.0 million. Using the percentage-of-completion method, how much revenue and income should the contractor recognize in the second year of the project?

Revenue Income

A, $1,076,923 $376,923

B. $1,000,000 $0

C. $923,077 $-76,923

**13.-**Delta Corporation has a contract to build a custom test chamber for a client for $100,000. Delta Corporation uses the percentage-of-completion method for accounting and estimates the total costs for the project to be equal to $80,000. Delta Corporation has promised to complete the project within three years. At year-end the customer has paid $60,000, equaling the total amount billed for the year, and total costs incurred to date are $40,000. On the income statement, net income for the year-end will be:

A. $20,000.

B. $10,000.

C. -$10,000.

**14.-**Selected information from Omega, Inc.'s financial activities in the year 2019 is as follows:

* Net income = $460,000.
* 2,300,000 shares of common stock were outstanding on January 1.
* The average market price per share was $2 and the year-end stock price was $1.50.
* 1,000 shares of 8%, $1,000 par value preferred shares were outstanding on January 1. Preferred dividends were paid in 2019.
* 10,000 warrants, each of which allows the holder to purchase 100 shares of common stock at an exercise price of $1.50 per common share, were outstanding the entire year.

Caledonia's diluted earnings per share for 2019 are *closest* to:

A. $0.180.

B. $0.15.

C. $0.165.

**15.-**Sigma Company had the following numbers of shares outstanding during the year:

Beginning of the year: 8,000,000 shares

Issued on April 1: 750,000 shares

Paid stock divided of 20% on July 1

Issued on October 1: 100,000 shares

Purchased Treasury stock November 1: 1,000.000 shares

Split 2 for 1 on December 31

Based on this information, what is the weighted number of shares outstanding for the year?

A. 42,444,444.

B. 20,266,667.

C. 20,783,333.

**16.-**Selected information about a company is as follows:

|  |  |  |
| --- | --- | --- |
|  | **Current 2020** | **Projection 2021** |
| Sales | 2200 | 2500 |
| Variable operating costs (% of sales) | 28% | 30% |
| Fixed operating costs | 1400 | 1400 |
| Tax rate | 25% | 25% |
| Dividends paid | 55 | 60 |
| Interest bearing debt at 5% | 500 | 500 |

The forecasted net income (in $ thousands) for next year is *closest* to:

A. 169.

B. 244.

C. 202.

**17.-**The following information is available on a company for the current year.

|  |  |
| --- | --- |
| Net income | $1,000,000 |
| Average number of common shares | 100000 |
| Details of convertible securities outstanding: | |
| Convertible preferred shares outstanding | 2000 |
| Dividend share | $10 |
| Each preferred share is convertible into 5 shares of common stock | |
| Convertible bonds, $100 face value per bond | $80.000 |
| 8$ coupon | |
| Each bond is convertible into 25 shares of common stock. | |
| Corporate tax rate | 40% |

The company’s diluted EPS is closest to:

A. $7.72.

B. $7.57.

C. $7.69.

**18.-**The following information is from a company’s accounting records ($ millions):

|  |  |
| --- | --- |
| Revenues for the year | 12,500 |
| Total expenses for the year | 10,000 |
| Gains from available-for-sale securities | 1,475 |
| Loss on foreign currency translation adjustments on a foreign subsidiary | 325 |
| Dividends paid | 500 |

The company’s total comprehensive income (in $ millions) is closest to:

A. 1,150.

B. 3,150.

C. 3,650.

**19.-**Using the data below, an analyst is in the process of comparing two companies (Delta and Gamma) that are in the same industry.

**Company Delta (in $ millions, except per share data)**

|  |  |
| --- | --- |
| Net income | $7,098 |
| Weighted average common shares outstanding | 4,366 |
| Common share dividends | $1,700 |
| Stock price per share at year-end | $41.00 |

**Company Gamma (in $ millions, except per share data)**

|  |  |
| --- | --- |
| Basic EPS | $4.35 |
| Earnings multiple | 21.17× |
| Dividend payout ratio | 25.9% |

Compared with Company Gamma, Company Delta most likely has a higher:

A. price-to-earnings ratio.

B. dividend payout ratio.

C. earnings per share.

**20.-**The following data are available on Omega Company:

|  |  |
| --- | --- |
| **Metric** | **Omega** |
| Stock price per share | $60.75 |
| Comprehensive income (millions) | $193.0 |
| Other comprehensive income (millions) | $87.6 |
| Common shares outstanding (millions) | $46.5 |

On a net income basis, the company’s P/E is closest to:

A. 10.1.

B. 14.6.

C. 26.8.

**21.-**Assume Alpha Company recognizes contract revenues using the percentage-of-completion method and that it enters into the following five-year contract:

|  |  |
| --- | --- |
| Total Five-Year Revenue | $10,000,000 |
|  | |
| **Annual Costs** | |
| Year 1 | $500,000 |
| Year 2 | $800,000 |
| Year 3 | $900,000 |
| Year 4 | $1,500,000 |
| Year 5 | $1,300,000 |
| Total | $5,000,000 |

Alpha Company’s reported revenue in Year 5 will be:

A. $10,000,000.

B. $2,600,000.

C. $6,300,000.

**22.-** At the beginning of 2019, Kappa Inc. entered into a contract to build a road for the government. The project will be completed in four years. The following information is available about the contract:

* Total revenue $15 million
* Total cost of project $12 million
* Cost incurred during 2019 $2 million

If the outcome of the project cannot be measured reliably, revenue recognized during 2019 under U.S. GAAP and IFRS is most likely:

IFRS GAAP

1. $2 million $2 million
2. None None
3. $2 million None

**23**.-An Analyst gathered the following information about a Gamma company that follows U.S. GAAP for year 2018:

* Beginning shareholders’ equity $1,250,000
* Net income $385,000
* Dividends declared $85,000
* Dividends paid $75,000
* Ending shareholders’ equity $1,650,000

The company’s comprehensive income for the year is closest to:

A. $350,000.

B. $485,000.

C. $365,000.

**24.-**The average market price of Omega Inc.’s stock over the year was $40 and the price at the end of the year was $50. The company’s capital structure included:

• Warrants on 10,000 ordinary shares with an exercise price of $35.

• Options on 20,000 ordinary shares with an exercise price of $30.

The number of inferred shares that will be used in the computation of diluted EPS is closest to:

A. 6,250.

B. 19,000.

C. 11,000.

**25.-** Selected data from Sigma Company's balance sheet at the end of the year follows:

Investment in Zeta Company, at fair value = $150,000

Deferred taxes = $86,000

Common stock, $ 1 par value = $ 550,000

Preferred stock, $ 1 00 par value = $ 175,000

Retained earnings = $893,000

Accumulated other comprehensive income = $46,000

The investment in Zeta Company had an original cost of $ 120,000. Assuming the investment in Beta is classified as available-for-sale, Sigma’s total owners ‘equity at year-end is closest to:

A. $ 1,618,000.

B. $ 1,664,000.

C. $ 1,714,00

**26.-**Two years ago, Epsilon Corp. purchased machinery for $800,000. At the end of last year, the machinery had a fair value of $720,000. Assuming Epsilon uses the revaluation model, what amount, if any, is recognized in Epsilon's net income this year if the machinery's fair value is $810,000?

A. $0.

B. $80,000.

C. $90,000.

**27*.-***Calculate comprehensive income for Kappa C. Corporation using the selected financial statement data found in the following table.

Triple C. Corporation - Selected Financial Statement Data

|  |  |
| --- | --- |
| Net Income | $1,000 |
| Dividends received from available-for-sale securities | $60 |
| Unrealized loss from foreign currency translation | ($15) |
| Dividends paid | ($110) |
| Reacquire common stock | ($400) |
| Unrealized gain from cash flow hedge | $30 |
| Unrealized loss from available-for-sale securities | ($10) |
| Realized gain on sale of land | $65 |

A. $605

B. $1,005

C. $895

**28.-**Assume GAAP. An analyst gathers the following information about Delta Company:

|  |  |
| --- | --- |
| Average market price per share of common stock during 2019 | 40 $ |
| Exercise price per share for options on 50,000 common shares | 50 $ |
| Exercise price per share for warrants on 20,000 common shares | 30 $ |

Using the treasury stock method, the number of incremental shares used to compute diluted earnings per share is closes to:

A. $5,000

B. $15,000

C. $20,000

# CHAPTER 2 – BALANCE SHEETS

**29.**-What is the net income of a firm that has a return on equity of 12%, a leverage ratio of 1.5, an asset turnover of 2, and revenue of $1 million?

A. $400,000

B. $40,000

C. $36,000

**30.-**Assume that Gamma company has the following portfolio of marketable securities, which were acquired at the end of last year:

|  |  |  |
| --- | --- | --- |
| **Category** | **Original Cost (in €) at the End of Last Year** | **Fair Market Value (in $) at the End of the Current Year** |
| Held for trading | 12,000,000 | 12,500,000 |
| Available for sale | 17,000,000 | 16,000,000 |

If the company reports under IFRS compared with US GAAP, its net income in the current year will most likely be:

A. the same.

B. $500,000 higher.

C. $1,000,000 lower.

**31.-** The following information is available for Kappa Company ($):

|  |  |
| --- | --- |
| **December 31, 2018** | |
| Total assets | $100,000 |
| Net income for the year | $4,000 |
| Dividend paid | $0 |

* Assets are equally financed with debt and equity
* 50% of the equity comes from contributed capital

|  |  |
| --- | --- |
| **December 31, 2019** | |
| Total assets | $92,000 |
| Net income (loss) for the year | ($3,000) |

* No new debt or equity issued or repurchased,

In 2019, the company most likely:

A. paid a dividend of $1,000.

B. did not pay a dividend because it incurred a loss.

C. paid a dividend of $5,000.

**32.-** The following table presents excerpts from financial statements for two mer­chandising companies following the format found in each of their annual reports.

|  |  |  |  |
| --- | --- | --- | --- |
| **Company Alpha(US$ millions)** | | **Company Beta (US$ millions)** | |
| **Assets** | | **Assets** | |
| Noncurrent assets | 9,640 | Current assets | 4,333 |
| Current assets | 2,096 | Noncurrent assets | 19,923 |
| Total assets | 11,736 | Total assets | 24,256 |

Which of the companies most likely prepares its financial statements in accor­dance with US GAAP?

A. Only Company B

B. Both companies

C. Only Company A

**33.-**Based on the presented information about a company’s trade receivables, the bad debt expense (in $ millions) for 2019 is closest to:

|  |  |  |
| --- | --- | --- |
| **($ millions)** | **2019** | **2018** |
| Accounts receivable, gross | 6,620 | 4,840 |
| Allowance for doubtful accounts | 92 | 56 |
| Write-offs during the year | 84 | 42 |

A. 84.

B. 36.

C. 120.

**34.-**Epsilon Inc. ships 5 machines to a customer at $5,550 per machine. The total cost for Epsilon Inc. is $26,250 and payment is due in 60 days. No cash changes hands at delivery. The accounting treatment related to this transaction at the time of shipment most likely includes:

A. Accounts receivable and revenue increased by $27,750 and inventory decreased by $26,250.

B. Revenue increased by $5,550, cost of goods sold decreased by $26,250 and cash remains unchanged.

C. Accounts receivable and revenue increased by $27,750 and inventory and cost of goods sold decreased by $26,250.

**Use the following information to answer Questions 35 through 36**

At the beginning of the year, Alpha Company purchased 1,000 shares of Beta Company for $80 per share. During the year, Company Beta paid a dividend of $4 per share. At the end of the year, Company Beta's share price was $75.

**35.-** What amount should Alpha Company report on its balance sheet at year-end if the investment in Beta Company is considered a trading security, and what amount should be reported if the investment is considered an available-for-sale security?

Trading Available-for-sale

A. $75,000 $75,000

B. $75,000 $80,000

C. $80,000 $80,000

**36.-** What amount of investment income should Alpha Company recognize in its income statement if the investment in Beta Company is considered trading, and what amount should be recognized if the investment is considered available-for-sale?

Trading Available-for-sale

A. ($1,000) ($1,000)

B. ($1,000) $4,000

C. ($5,000) $4,000

**Use the following data to answer Questions 37 through 39.**

Delta Corporation purchased a 6% bond, at par, for $ 1,000,000 at the beginning of the year. Interest rates have recently increased and the market value of the bond declined $20,000. Determine the bond's effect on Delta Corporation's financial statements.

**37.-**If the bond is classified as a *held-to-maturity* security.

Balance Income statement

A. $1,000,000 $60,000

B. $980,000 $60,000

C. $1,000,000 $20,000

**38.-**If the bond is classified as a *Trading security*.

Balance Income statement Income statement

A. $1,000,000 $60,000 $20,000

B. $980,000 $60,000 $20,000

C. $1,000,000 $60,000 $0.0

**39.-** If the bond is classified as an Available-for-sale *security*.

Balance Income statement Stockholder’s equity

A. $1,000,000 $60,000 $0.00

B. $980,000 $60,000 $20,000

C. $1,000,000 $60,000 $20,000

# CHAPTER 3 – CASH FLOW STATEMENT

**40.-**Use the following information to calculate cash flows from operations using the indirect method.

|  |  |
| --- | --- |
| Net Income | $12,000 |
| Depreciation Expense | $1,000 |
| Loss on sale of machinery | $500 |
| Increase in Accounts Receivable | $2,000 |
| Decrease in Accounts Payable | $1,500 |
| Increase in Income taxes payable | $500 |
| Repayment of Bonds | $3,000 |

A. Increase in cash of $9,500.

B. Increase in cash of $10,500.

C. Increase in cash of $7,500.

**41.-**Alpha Inc.'s U.S. GAAP balance sheet as of December 31, 2019 included the following information (in $):

31-12-2018 31-12-2019

Accounts Payable 300,000 500,000

Dividends Payable 200,000 300,000

Common Stock 1,000,000 1,000,000

Retained Earnings 700,000 1,000,000

Alpha's net income in 2019 was $800,000. What was Alpha's cash flow from financing (CFF) in 2019?

A. −$300,000.

B. −$500,000.

C. −$400,000.

**42.-** Gamma Painting Company is a commercial painting contractor. At the beginning of 2019, Gamma's net working capital was $350,000. The following transactions occurred during 2019:

Performed services on Credit: $150,000

Purchased office equipment for cash: $10,000

Recognized salaries expense: $54,000

Purchased paint supplies on credit: $25,000

Consumed paint supplies: $20,000

Paid salaries: 50,000

Collected accounts receivable: 157,000

Recognized straight-line depreciation expense: 2,000

Paid accounts payable: 15,000

Calculate Gamma's working capital at the end of 2019 and the change in cash for the year 2019.

**Woking capital Change in Cash**

A, $416,000 $80,000

B. $414,000 $82,000

C, $416,000 $82,000

**43.-**Beta, Inc.'s financial information includes the following, with "change" referring to the difference from the prior year (in $ millions):

Net Income: 27

Change in Accounts Receivable: +4

Change in Accounts Payable: +1

Change in Inventory: +5

Loss on sale of equipment: -8

Gain on sale of real estate: +4

Change in Retained Earnings: +21

Dividends declared and paid: +4

Beta, Inc.'s cash flow from operations (CFO) in millions was:

A. $23.

B. $27.

C. $15.

**44.-**Alpha Corp. has the following transactions in 2019.

* Alpha's equipment with a book value of $55,000 was sold for $85,000 cash.
* A parcel of land was purchased for $100,000 worth of Alpha common stock.
* Gamma company paid Alpha preferred dividends of $40,000.
* Alpha declared and paid a $100,000 cash dividend.

Under U.S. GAAP, what is cash flow from financing (CFF) for Alpha for 2019?

A. −$60,000.

B. −$115,000.

C. −$100,000.

**45.** For 2019, Omicron Company had 73 days of inventory on hand. Omicron would like to decrease its days of inventory on hand to 50. Omicrons' cost of goods sold for 2019 was $100 million. Omicron expects cost of goods sold to be $124.1 million in 2020. Assuming a 365-day year, compute the impact on Omicron' operating cash flow of the *change* in average inventory for 2020.

A. $3.0 million source of cash.

B. $6.3 million source of cash.

C. $3.0 million use of cash.

**46.-** The following annual financial data are available for a company (in $ millions):

|  |  |
| --- | --- |
| Beginning interest payable | 90.4 |
| Cash paid for interest | 103.3 |
| Ending interest payable | 84.5 |

Interest expense (in millions) for the year is closest to:

A. $97.4.

B. $109.2.

C. $71.6.

**47.-**Under the indirect method, a US GAAP-compliant company reported total revenue of $359 million, net income of $35 million, a decrease in income tax payable of $16 million, and an increase in interest expense payable of $22 mil­lion. Based on this information, converting to the direct method would result in cash paid for operating expenses of:

A. $330 million.

B. $353 million.

C. $318 million.

**48.-**A firm reported the following financial statement items (in $ millions):

|  |  |
| --- | --- |
| Net income | 2,100 |
| Non-cash charges | 400 |
| Interest expense | 300 |
| Capital expenditures | 210 |
| Working capital expenditurees | 0 |
| Net borrowing | 1,600 |
| Tax rate | 40% |

The free cash flow to the firm (FCFF) is closest to:

A. $2,110.

B. $2,470.

C. $2,590.

**49.-** The following financial statement data are available for Omicron Company (in $ thousands):

|  |  |
| --- | --- |
| Net income | 500 |
| Depreciation | 150 |
| Cash flow from operations | 600 |
| Free cash flow to the firm | 300 |
| Beginning total assets | 4,000 |
| Ending total assets | 6,000 |
| Ending cash balance | 50 |
| Book value | 3,000 |

The company’s cash return on assets ratio is closest to:

A. 12%.

B. 10%.

C. 13%.

**50.-** An analyst gathered the following information from a company’s 2013 financial statements.

* Net income = $24 million
* Non-cash charges = $6 million
* Cash flow from operations = $12 million
* After tax interest paid = $2.6 million
* Capital expenditure = $9.5 million
* Tax rate = 35%

The free cash flow for the firm (FCFF) is closest to:

A. $5.1 million.

B. $8.7 million.

C. $11.1 million.

**51.-** John Smith is analyzing selective financial information for Upsilon Corp. for the years 2018 and 2019. Fisher Corp. complies with U.S. GAAP.

|  |  |  |  |
| --- | --- | --- | --- |
| **$’000s** | **2019** | **2018** | **Change** |
| Net income | 255 | 207 | +48 |
| Depreciation & amortization | 28 | 20 | +8 |
| Accounts receivable | 180 | 135 | +45 |
| Inventory | 89 | 95 | -6 |
| Accounts payable | 140 | 128 | +12 |
| Interest payable | 56 | 50 | +6 |
| Taxes payable | 48 | 53 | -5 |
| Accumulated depreciation | 128 | 105 | +23 |
| Short-term debt | 107 | 98 | +9 |

Using the indirect method, Fisher Corp.’s 2013 cash flow from operating activities is closest to:

A. $140,000.

B. $257,000.

C. $279,000.

**52.-** An analyst gathered the following information from a company’s 2018 financial statements.

* Net income = $24 million
* Non-cash charges = $6 million
* Cash flow from operations = $12 million
* After tax interest paid = $2.6 million
* Capital expenditure = $9.5 million
* Tax rate = 35%

The free cash flow for the firm (FCFF) is closest to:

A. $5.1 million.

B. $8.7 million.

C. $11.1 million.

**53.-** Assume U.S. GAAP holds. An analyst gathered the following information about a company for a year 2019:

* Net income $12.5 million
* Depreciation $1.25 million
* Amortization $0.5 million
* Interest expense $3 million
* Net capital expenditure $1.75 million
* Dividends paid $0.25 million
* Working capital investment $1.15 million
* Tax rate 35%

Free cash flow to the firm for the year is closest to:

A. $13.3 million

B. $13.05 million

C. $9.4 million

**54.-**Using the following information, what is the firm's cash flow from operations?

|  |  |
| --- | --- |
| Net Income | $120 |
| Decrease in accounts receivable | $20 |
| Depreciation | $25 |
| Increase in inventory | $10 |
| Increase in accounts payable | $7 |
| Decrease in wages payable | $5 |
| Increase in deferred tax liabilities | $15 |
| Profit from the sale of land | $2 |

A. $ 158 .

B. $ 170.

C. $ 174 .

**Assuming U.S. GAAP, use the following data to answer Questions 55 through 57**

|  |  |
| --- | --- |
| Net income | $45 |
| Depreciation | $75 |
| Taxes paid | $25 |
| Interest paid | $5 |
| Dividend paid | $10 |
| Cash received from sale of company building | $40 |
| Sale of preferred stock | $35 |
| Repurchase of common stock | $30 |
| Purchase of machinery | $20 |
| Issuance of bonds | $50 |
| Debt retired through issuance of common stock | $45 |
| Paid off long-term bank borrowings | $15 |
| Profit on sale of building | $20 |

**55.-**Cash flow from operations is:

A. $70.

B. $ 100.

C. $ 120.

**56.-**Cash flow from investing activities is:

A. -$30.

B. $20.

C. $50.

**57.-**Cash flow from financing activities is:

A. $30.

B. $55.

C. $75.

**58**.- Given the following:

Sales=$1,500

Increase in inventory=$100

Depreciation=$150

Increase in accounts receivable=$50

Decrease in accounts payable=$70

After-tax profit margin=25%

Gain on sale of machinery= 30

Cash flow from operations is:

A. $115.

B. $275.

C. $375.

**59.-** Omega Corporation reported sales revenue of $ 150,000 for the current year. If accounts receivable decreased $ 10,000 during the year and accounts payable increased $4,000 during the year, cash collections were:

A. $ 154,000.

B. $ 160,000.

C. $ 164,000.

**60.-** Net income for Gamma Inc. for the year ended December 31, 2019 was $78,000. Its accounts receivable balance at December 31, 2019 was $ 121,000 and this balance was $69,000 at December 31, 2018. The accounts payable balance at December 31, 2019 was $72,000 and was $43,000 at December 31, 2018. Depreciation for 2019 was $ 12,000, and there was an unrealized gain of $15,000 included in 2019 income from the change in value of trading securities. Which of the following amounts represents Gamma Inc.'s cash flow from operations for 2019?

A. $52,000.

B. $67,000.

C. $82,000.

**61.-** Martin, Inc. had the following transactions during 2018:

• Purchased new fixed assets for $75,000.

• Converted $70,000 worth of preferred shares to common shares.

• Received cash dividends of $ 12,000. Paid cash dividends of $21,000.

• Repaid mortgage principal of $ 17,000.

Assuming Martin follows U.S. GAAP, which of the following amounts represents Martin's cash flows from investing and cash flows from financing in 2018, respectively?

Cash flows from investing Cash flows from financing

A. ($5,000) ($21,000)

B. ($75,000) ($21,000)

C. ($75,000) ($38,000)

**62.** Assume US. GAAP. At the end of the year, Alpha Company sold equipment for $30,000 cash. The company paid $110,000 for the equipment several years ago and had recorded accumulated depreciation of $70,000 at the time of its sale. All else equal, the equipment sale will result in the company’s cash flow from:

A. Investing activities increasing by $30,000

B. Investing activities decreasing by $10,000

C. Operating activities being $10,000 less than net income

**63.-** At the beginning of 2019, a lessee company enters into a new lease agreement this is correctly classified as a finance lease, with the following terms:

|  |  |
| --- | --- |
| Annual lease payments due at the end of the year | 100 000 $ |
| Lease term | 5 years |
| Appropriate discount rate | 12% |
| Depreciation method | straight-line basis |
| Estimated salvage value | $0 |

With respect to the effect of the lease on the company’s financial statement in the first year of the lease, which of the following statement is most accurate? The reduction in the company’s:

A. pre-tax income is $72,096

B. Cash flow from financing is $56,742

C. Cash flow from operations is $72,096

**64.-** The exhibit highlights selective financial information from Beta Incorporated's balance sheet and cash flow statement for the years 2019 and 2018. The company uses the direct format preparing its cash flow statement.

|  |  |  |  |
| --- | --- | --- | --- |
| **$ thousands** | **2019** | **2018** | **Change** |
| Waves payable | 48 | 35 | +13 |
| Taxes payable | 169 | 180 | -11 |
| Deferred tax asset | 32 | 30 | +2 |
| Cash paid for income taxes | 78 | 74 | +4 |
| Cash paid for income to employees | 15 | 15 | 0 |

The amount of income tax and wages expense reported by Beta in its income statement for the year 2019 is closest to:

Income tax expense Wages expenses

A. ($5,000) $13,000

B. $67,000 $28,000

C. $89,000 $2,000

# CHAPTER 4 – FINANCIAL ANALYSIS TECHNIQUES

**65.-**Given the following information about Beta Inc.:

Receivables turnover=10 times.

Payables turnover=12 times.

Inventory turnover=8 times.

What are the average receivables collection period, the average payables payment period, and the average inventory processing period respectively?

Collection Period Payment Period Inventory period

A. 30 37 46

B. 30 37 52

C. 37 47 42

**66.-**Delta Corp. had the following financial results for the fiscal 2019 year:

Current ratio 2.00

Quick ratio 1.25

Current liabilities $100,000

Inventory turnover 12

Gross profit % 25

The only current assets are cash, accounts receivable, and inventory. The balance in these accounts has remained constant throughout the year. Delta's net sales for 2019 were:

A. $1,200,000.

B. $900,000.

C. $300,000.

**67.-** Beta Company has a receivables turnover of 10, an inventory turnover of 5, and a payables turnover of 12. The Beta Company’s cash conversion cycle is closest to:

A. 79 days.

B. 30 days.

C. 37 days.

**68.-**Consider the following information available for a company for last year:

|  |  |
| --- | --- |
| ROE | 4.74% |
| Net profit margin | 2.60% |
| Revenue | $400,000 |
| Average total assets | $300,000 |

The average shareholder’s equity is closest to:

A. $164,557.

B. $123,418.

C. $219,409.

**69.-** The following data are available on a company:

Metric

Working capital: $60 million

Non-current assets: $235 million

Equity: $170 million

Current ratio: 1.75

The company’s financial leverage is closest to:

A. 1.7.

B. 2.2.

C. 1.2.

**70.-** Selected information from a company’s recent income statement and balance sheets is presented in the following table.

Selected Financial Information as of 31 December

|  |  |  |
| --- | --- | --- |
| **($ Thousands)** | **2019** | **2018** |
| Sales | 2,240,000 |  |
| Cost of goods (COGS) | 1,320,000 |  |
| Cash and Investment | 210,700 | 191,600 |
| Accounts receivable | 212,800 | 201,900 |
| Inventories | 63,000 | 71,500 |
| Accounts payable | 129,600 | 157,200 |
| Other current liabilities | 130,700 | 182,700 |

The company operates in an industry in which suppliers offer terms of 2/10, net 30.The payables turnover for the average company in the industry is 8.5 times. Which of the following statements is most accurate? In 2019, the company, on average:

A. paid its accounts within the payment terms provided.

B. paid its accounts more promptly than the average firm in the industry.

C. took advantage of early payment discounts.

**71.-** The following data are available on a company:

|  |  |
| --- | --- |
| **Metric** | **$ thousands** |
| Interest expense and payments | 1,000 |
| Income tax expense | 1,100 |
| Net income | 3,400 |
| Lease payments | 500 |

The company’s fixed charge coverage ratio is closest to:

A. 3.67.

B. 4.00.

C. 2.27

**72.-** Selected information for Sigma Company is provided.

|  |  |
| --- | --- |
|  | **$ millions** |
| Sales | 4,800 |
| Cost of goods sold | 2,880 |
| Purchases | 2,940 |
| Average receivable | 625 |
| Average Inventory | 710 |
| Average payables | 145 |

The company’s cash conversion cycle (in days) is closest to:

A. 84.

B. 138.

C. 120.

**73.-** The financial leverage ratio of a firm, whose total debt ratio is 54% and debt-to-equity is 1.15, is closest to:

A. 0.47.

B. 0.62.

C. 2.13.

**74.-** Use the following information for Omicron, Inc.:

• EBIT I revenue = 10%

• Tax retention rate = 60%

• Revenue / assets = 1.8 times

• Current ratio = 2 times

• EBT /EBIT = 0.9 times

• Assets / equity = 1 .9 times

Omicron Inc.'s return on equity is closest to:

A. 10.5%.

B. 14.0%.

C. 18.5%.

**75.-** The following information is summarized from Omicron, Inc.'s financial statements for the year ended December 31, 2019

• Sales were $800,000.

• Net profit margin was 20%.

• Sales to assets was 50%

• Equity multiplier is 1.6.

• Interest expense was $30,000.

• Dividends declared were $32,000.

Omicron, Inc.'s sustainable growth rate based on results from this period is closest to:

A. 3.2%.

B. 8.0%.

C. 12.8%.

**76.-** The following figure provides data for three companies.

|  |  |  |  |
| --- | --- | --- | --- |
| **Growth Analysis data** | | | |
| **Company** | **Alpha** | **Beta** | **Delta** |
| Earnings per share | 3,00 $ | 4,00 $ | 5,00 $ |
| Dividends per share | 1,50 $ | 1,00 $ | 2,00 $ |
| Return on Equity | 0,14 $ | 0,12 $ | 0,10 $ |

Calculate the sustainable growth rate for each company

Alpha Beta Delta

A. 6.00% 7.00% 8.00%

B. 7.00% 9.00% 6.00%

C. 6.00% 9.00% 7.00%

**77.-** Delta Company is a limestone extractor operating in the U.S. The extractor’s chief financial analyst, Carl Douglas, has summarized selective financial information for the years 2017 to 2019 in the exhibit below.

|  |  |  |  |
| --- | --- | --- | --- |
| **$ millions** | **2019** | **2018** | **2017** |
| Operating cash flow | 35,80 | 30,90 | 38,60 |
| EBIT | 20,50 | 2,80 | 25,00 |
| Long-term debt | 12,00 | 10,40 | 8,60 |
| Short-term borrowing | 8,50 | 7,60 | 5,40 |
| Interest payments | 2,20 | 1,60 | 1,00 |
| Lease payments\* | 21,00 | 16,00 | 18,50 |

\*Interest payments represent 1/3 of lease payments

Delta’s fixed charge coverage ratio is the highest in:

A. 2017.

B. 2018.

C. 2019.

# CHAPTER 5 – INVENTORIES

**78.-**Kappa Corp. had a beginning inventory of $9,500 (250 units) and made three inventory purchases during the fiscal year:

Purchases Units Total Cost

01/03/2019 400 $14,800

01/07/2019 450 $14,850

01/07/2019 30 units $8,100

01/09/2019 550 $15,950

Kappa Corp. began operations on Jan. 1, 2019. Kappa uses the LIFO method of determining cost of goods sold. First year sales were 1,300 units. The most likely effects of using LIFO inventory costing as compared to FIFO in Kappa’s 2019 financial statements are:

A. higher net income; lower working capital.

B. higher net income; higher working capital.

C. lower net income; lower working capital.

**79.-**Omega Company uses a periodic inventory system and the FIFO inventory cost method. In the most recent period, Omega had beginning inventory of $4,200, purchases of $1,400, cost of sales $1,300, and ending inventory of $4,300. If Omega had used a perpetual inventory system, its ending inventory would have been:

A. $4,300.

B. $4,200.

C. $4,400.

**80.-** Given the following data on a firm's inventory, purchases, and sales:

|  |  |  |
| --- | --- | --- |
|  | **Units** | **Unit Price** |
| Beginning Inventory | 559 | $1.00 |
| Purchases | 785 | $5.00 |
| Sales | 848 | $15.00 |

Cost of goods sold using the first in, first out (FIFO) method is closest to:

A. $2,004.

B. $2,830.

C. $8,730.

**81.-** Given the following data on a firm's inventory, purchases, and sales:

|  |  |  |
| --- | --- | --- |
|  | **Units** | **Unit Price** |
| Beginning Inventory | 559 | $1.00 |
| Purchases | 785 | $5.00 |
| Sales | 848 | $15.00 |

Ending inventory using the first in, first out (FIFO) method is:

A. $3,988.

B. $2,480.

C. $2,356.

**82.-** Given the following inventory data about Sigma Company:

* Beginning inventory 20 units at $50/unit
* Purchased 10 units at $45/unit
* Purchased 35 units at $55/unit
* Purchased 20 units at $65/unit
* Sold 60 units at $80/unit

What is the inventory value at the end of the period using first in, first out (FIFO)?

A. $3,100.

B. $1,575.

C. $3,475.

**83.-** Given the following inventory data about Kappa Company:

|  |  |  |
| --- | --- | --- |
|  | **Units** | **Unit Price** |
| Beginning Inventory | 709 | $2.00 |
| Purchases | 556 | $6.00 |
| Sales | 959 | $13.00 |

What is gross profit using the FIFO method and LIFO method?

FIFO LIFO

1. $8,325 $8,862
2. $8,862 $9,549
3. $9,549 $8,325

**84.-** The following financial statement data are available for Omicron Company:

|  |  |
| --- | --- |
| **Metric** | **$ thousands** |
| Net income | 500 |
| Depreciation | 150 |
| Cash flow from operations | 600 |
| Free cash flow to the firm | 300 |
| Beginningg total assets | 4,000 |
| Ending total assets | 6,000 |
| Ending cash balance | 50 |
| Book value | 3,000 |

The company’s cash return on assets ratio is closest to:

A. 12%.

B. 10%.

C. 13%.

**85.-** Omega Inc. sells iPhones. On October 19, it purchased a large number of iPhones at a cost of $90 each. Due to an oversupply of cellphones remaining in the marketplace due to lower than anticipated demand during the Christmas season, the selling price at December 31 is $80 and the replacement cost is $73. The normal profit margin is 5 percent of the selling price and the selling costs are $2 per recorder. Under U.S. GAAP, what is the value of the recorders on December 31?

A. $78.

B. $73.

C. $74.

**86.-** Given the following data on a firm’s inventory, purchases and sales:

|  |  |  |
| --- | --- | --- |
|  | **Units** | **Units Price** |
| Beginning Inv. | 559 | $1.00 |
| Purchases | 785 | $5.00 |
| Sales | 848 | $15.00 |

Cost of goods sold using the weighted average cost method is *closest* to:

A. $2,000.

B. $2,830.

C. $3,990.

**87.-**Alpha Company uses the LIFO inventory accounting method. Mary Gebel, president, wants to determine the financial statement impact of changing to the FIFO accounting method. Selected company information follows:

* Year-end inventory: $22,000
* LIFO reserve: $4,000
* Change in LIFO reserve: $1,000
* LIFO cost of goods sold: $18,000
* After-tax income: $2,000
* Tax rate: 40%

Under FIFO, the nursery's ending inventory and after-tax profit for the year would have been:

FIFO Ending Inv. FIFO after tax-profit

A. $18,000 $2,600

B. $26,000 $2,600

C. $26,000 $1,400

**88.-** At the end of 2019, Sigma Corporation reported last-in, first-out (LIFO) inventory of $20 million, cost of goods sold (COGS) of $64 million, and inventory purchases of $58 million. If the LIFO reserve was $6 million at the end of 2018 and $16 million at the end of 2019, compute first-in, first-out (FIFO) inventory at the end of 2019 and FIFO COGS for the year ended 2019.

FIFO Inventory FIFO COGS

1. $36 million $54 million
2. $26 million $54 million
3. $36 million $74 million

**89.-** During the year, Omega Company (retailer), purchases 1,000 units of inventory at $20.20 per unit. In addition, the following items relate to inventory acquisition and handling during the year.

|  |  |
| --- | --- |
| **Item Description** | **$ thousands** |
| Volume rebate received | 404 |
| Import and sales taxes | 1,950 |
| Transport and transport insurance costs | 325 |
| Storage costs of finished goods | 1,550 |
| Warehouse administrative costs | 3,150 |

The total costs (in thousands) that will be included in inventory are closest to:

A. $24,341.

B. $22,071.

C. $22,766.

**90.-** An analyst wants to compare a company with its industry and gathers the fol­lowing selected financial information for the company:

|  |  |
| --- | --- |
| Current assets including inventory | $260,000 |
| Current liabilities | $80,000 |
| LIFO reserve | $53,000 |

If the industry norm is to use the FIFO method of inventory valuation, the cur­rent ratio of the company that the analyst would use for comparison purposes is closest to:

A. 3.91.

B. 3.25.

C. 2.59.

**91.-**A company incurs the following costs related to its inventory during the year:

|  |  |
| --- | --- |
| **Cost** | **$ millions** |
| Purchase price | 100,000 |
| Trade discounts | 5,000 |
| Import duties | 20,000 |
| Shipping of raw materials to manufacturing facility | 10,000 |
| Manufacturing conversion costs | 50,000 |
| Abnormal costs as a result of waste material | 8,000 |
| Storage cost of finished goods prior to shipping to customers | 2,000 |

The amount charged to inventory cost (in millions) is closest to:

A. $177,000.

B. $185,000.

C. $175,000.

**92.-** An analyst wants to compare a company with its industry and gathers the fol­lowing selected financial information for the company:

|  |  |
| --- | --- |
| Current assets including inventory | $260,000 |
| Current liabilities | $80,000 |
| LIFO reserve | $53,000 |

If the industry norm is to use the FIFO method of inventory valuation, the cur­rent ratio of the company that the analyst would use for comparison purposes is closest to:

A. 3.91.

B. 3.25.

C. 2.59.

**93.-** In 2019, the cost of ending inventory reported by Delta Company, a manufacturer of office equipment, was $22 million. Delta Company compiles its financial statements in accordance with IFRS.

* Replacement cost = $20.5 million
* NRV = $21.2 million
* NRV less profit margin = $19.7 million

Based on the data shown, Delta Company would most likely write its inventory down by:

A. $0.8 million.

B. $1.5 million.

C. $2.3 million.

**94.-**At the beginning of the year, Omega Company purchased all 500,000 shares of Sub Incorporated for $ 15 per share. Just before the acquisition date, Sub's balance sheet reported net assets of $6 million. Parent determined the fair value of Sub's property and equipment was $ 1 million higher than reported by Sub. What amount of goodwill should Parent report as a result of its acquisition of Sub?

A. $0.

B. $500,000.

C. $1,500,000.

**95.-** Bombardier Inc. a snowmobile manufacturer, uses LIFO inventory system. LIFO begins the year with an inventory of 3,000 snowmobiles, at a carrying cost of $4,000 each. In January, the company sells 2,000 snowmobiles at a price of $ 10,000 each. In July, the company adds 4,000 snowmobiles to inventory at a cost of $5,000 each. Compared to using a perpetual inventory system, using a periodic system for the firm's annual financial statements would:

A. increase COGS by $2 million.

B. leave ending inventory unchanged.

C. decrease gross profit by $4 million.

**96.-** A LIFO firm reports the following:

• Net income $125,000.

• Beginning inventory $25,000.

• Ending inventory $27,000.

• Beginning LIFO reserve $12,000.

• Ending LIFO reserve $15,000.

• Effective tax rate 40%.

Had the firm used FIFO to account for its inventory, its net income would have been:

A. $123,000.

B. $126,200.

C. $126,800.

**97.-** Lambda, Inc., sells specialized running shoes. At year-end, due to a sudden increase in manufacturing costs, the replacement cost per pair of shoes is $55. The original cost is $43, and the current selling price is $50. The normal profit margin is 10% of the selling price, and the selling costs are $3 per pair. According to U.S. GAAP, which of the following amounts should each pair of shoes be reported on Lambda's year-end balance sheet?

A. $42.

B. $43.

C. $47.

**98.-** Alpha Company, which uses LIFO, reported end-of-year inventory balances of $500 in 2018 and $700 in 2019. The LIFO reserve was $200 for 2018 and $300 for 2019. COGS during 2019 was $3,000. Convert 2019 ending inventory and COGS to a FIFO basis.

Ending Invent. 2019 COGS 2019

A. $1,000 $3,000

B. $1,000 $2,900

C. $2,900 $1,000

**99.-** At the beginning of 2018, Alpha Manufacturing Company had 560 units of inventory as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| **Year Purchased** | **Number of Units** | **Cost per Unit** | **Total Cost** |
| 2014 | 120 | $10 | $1,200 |
| 2015 | 140 | $11 | $1,540 |
| 2016 | 140 | $12 | $1,680 |
| 2017 | 160 | $13 | $2,080 |

Due to a strike, no units were produced during 2018. During 2018, Alpha sold 440 units. In the absence of the strike, Alpha would have had purchased 440 units a cost of $14 for each unit. Compute the artificial (phantom) profit that resulted from the liquidation of inventory.

COGS (with LIFO liquidation) COGS (if replaced the 440 units sold)

A. $5,300 $6,160

B. $6,160 $6,160

C. $6,160 $5,300

**100.-** Omicron, Inc. Sells I-Phones. Per-unit cost information pertaining to Omicron’s inventory is as follows:

Original cost = $210

Estimated selling price = $225

Estimated selling costs = $22

Net realizable value = $203

Replacement cost = $197

Normal profit margin = $12

What are the per-unit carrying values of Omicron’s inventory under IFRS and under U.S. GAAP?

IFRS GAAP

A. $203 $197

B. $197 $203

C. $210 $210

**101.-**Assume that in the year after the write-down in the previous example, net realizable value and replacement cost both increase by $ 10. What is the carrying under IFRS and under U.S. GAAP?

IFRS GAAP

A. $210 $197

B. $210 $210

C. $213 $197

**Use the following data to answer Questions 102 through 103**

Kappa Industries reports the following using the LIFO inventory costing method at

the end of 2019:

Current assets $ 10 million

Current liabilities $5 million

2018 LIFO reserve $500,000

2019 LIFO reserve $700,000

**102.-** What is the current ratio at the end of 2019 before and after the appropriate adjustment for comparability to a similar firm that reports using the FIFO inventory valuation method?

Before adjustment After adjustment

A. 2.00 2.14

B. 2.00 2.00

C. 2.14 2.00

**103.-** What is the appropriate adjustment to the firm's 2019 COGS to make the firm's income statement comparable to that of a firm that reports under the FIFO method?

A. $ -700,000

B. $+200,000

C. $ -200,000

# CHAPTER 6 – LONG-LIVED ASSETS

**104.-**Beta Company buys a delivery vehicle for €60,000. Beta expects to drive the vehicle 400,000 kilometers over 4 years, at the end of which the firm expects to be able to sell the vehicle for $10,000. At the end of Year 2, the vehicle has been driven 250,000 kilometers. If Beta depreciates the vehicle by the units of production method, its carrying value at the end of Year 2 is:

A. 31,250.

B. 15,000.

C. 28,750.

**105.-**Alpha Records obtains two intangible assets in a business acquisition: legal rights to reproduce songs, valued at $5 million, and a trademark valued at $1 million. The trademark expires in 10 years and can be renewed at a minimal cost. Alpha estimates a 5-year useful life for the song rights. Because much of the songs' economic value is realized in their early years, Alpha uses double-declining balance amortization. Amortization expense in the first year after the acquisition is closest to:

A. $2.2 million.

B. $2.0 million.

C. $2.1 million.

**106.-**A firm acquires investment property for $3 million and chooses the fair value model for financial reporting. In Year 1 the market value of the investment property decreases by $150,000. In Year 2 the market value of the investment property increases by $200,000. On its financial statements for Year 2, the firm will recognize a:

A. 150,000 increase in shareholders' equity.

B. 200,000 gain on its income statement.

C. 150,000 gain on its income statement and a $50,000 revaluation surplus in shareholders' equity

**107.-** Kappa Company purchased inventory on January 1, 2018, for $600,000. On December 31, 2018, the inventory had a net realizable value of $550,000 and a replacement cost of $525,000, which is also the NRV less the normal profit margin. What would be the carrying value of the inventory on the company's December 31, 2018, balance sheet prepared under?

IFRS GAAP

1. $525,000 $550,000
2. $525,000 $525.000
3. $550,000 $525,000

**108.-** Because of significant changes in the marketplace, the demand for a company’s product has fallen and is not expected to recover to previous levels. The follow­ing information is related to the patent under which the product is produced:

|  |  |
| --- | --- |
| **Item Description** | **$ thousands** |
| Carrying value amount | 36,000 |
| Undiscounted expected future cash flows | 38,000 |
| Present value of expected future cash flows | 32,000 |
| Fair value if sold | 34,000 |
| Costs to sell | 4,000 |

Which of the following statements is most accurate? The patent is impaired under:

A. IFRS only.

B. Both IFRS and US GAAP.

C. US GAAP only.

**109.-** At the start of the year, a company acquired new equipment at a cost of $50,000, estimated to have a three-year life and a residual value of $5,000. If the company depreciates the asset using the double declining balance method, the depreciation expense that the company will report for the third year is closest to:

A. $3,328.

B. $555.

C. $3,705.

**110.-**A company acquires equipment costing $100,000 with a four-year depreciable life and no salvage value. The planned annual production is 100, 200, 400, and 300 units, respectively. Under the units-of-production depreciation method, the Year 4 depreciation expense is closest to:

A. $30,000.

B. $12,500.

C. $25,000.

**111.-** The following financial statement data are available for Omicron Company ( in $ Thousands ):

|  |  |
| --- | --- |
| Net income | 500 |
| Depreciation | 150 |
| Cash flow from operations | 600 |
| Free cash flow to the firm | 300 |
| Beginning total assets | 4,000 |
| Ending total assets | 6,000 |
| Ending cash balance | 50 |
| Book value | 3,000 |

The company’s cash return on assets ratio is closest to:

A. 12%.

B. 10%.

C. 13%.

**112.-** A company owns an office building that it purchased in 2015 for $1,000,000. The real estate market has been volatile in the last few years. The company uses the revaluation model as allowed by IFRS, and the following table shows the building’s fair market values since 2015:

|  |  |
| --- | --- |
| **Year** | **Fair Market Value ($ thousands)** |
| 2015 | 1,000 |
| 2016 | 600 |
| 2017 | 800 |
| 2018 | 1,300 |

The net impact (in thousands) on the 2018 net income will most likely be an increase of:

A. $200.

B. $500.

C. $300.

**113.-**On January 1, 2019 Omega Inc. purchased an image processing unit for $250,000. The estimated useful life and residual value of the unit were eight years and $85,000 respectively. In the same year Omega Inc. reported operating profit of $650,000.

Relative to the straight-line method, in 2019, the double declining depreciation method will produce an operating profit that is:

A. $20,625 lower.

B. $41,875 lower.

C. $17,500 higher.

**114.-** Gamma Corporation has created employee goodwill by reorganizing its retirement benefit package. An independent management consultant estimated the value of the goodwill at $2 million. In addition, Gamma Corporation recently purchased a patent that was developed by a competitor. The patent has an estimated useful life of five years. Should Gamma report the goodwill and patent on its balance sheet?

Goodwill Patent

A. Yes No

B. No Yes

C. No No

**115.-** At the beginning of 2019, Alpha Corp. incurred $200,000 of research costs and $ 100,000 of development costs to create a new patent. The patent is expected to have a useful life of 40 years with no salvage value. Calculate the carrying value of the patent at the end of 2019, assuming Alpha follows U.S. GAAP.

A. $0.

B. $97,500.

C. $292,500.

**116.-** A firm recently recognized a $ 15,000 loss on the sale of machinery used in its manufacturing operation. The original cost of the machinery was $ 1 00,000 and the accumulated depreciation at the date of sale was $60,000. What amount did the firm receive from the sale?

A. $25,000.

B. $45,000.

C. $85,000.

**117.-** Compute the remaining useful life of the following asset:

Original cost = $1,500,000

Accumulated depreciation = $675,000

Straight-line depreciation expense = $225,000

A. 3.0 years.

B. 3.7 years.

C. 6.7 years.

**118.-** Information related to equipment owned by Kappa Company follows:

Original cost = $900,000

Accumulated depreciation to date = $100,000

Expected future cash flows = $825,000

Fair value = $790,000

Value in use = $785,000

Selling costs = $30,000

Assuming Kappa Company will continue to use the equipment, test the asset for impairment under both IFRS and U.S. GAAP, then carrying value are:

IFRS GAAP

A. $800,000 $825,000

B. $785,000 $800,000

C. $800,000 $825,000

**119.-** Wood Corporation paid $600 million for the outstanding stock of Pine Corporation. At the acquisition date, Pine reported the following condensed balance sheet.

|  |  |
| --- | --- |
| **Pine Corporation**  **Condensed Balance Sheet** | **Book value ( millions)** |
| Current assets | $80 |
| Plant and equipment, net | $760 |
| Goodwill | $30 |
| Liabilities | $400 |
| Stockholder’s equity | $470 |

The fair value of the plant and equipment was $ 120 million more than its recorded book value. The fair values of all other identifiable assets and liabilities were equal to their recorded book values. Calculate the amount of goodwill that Wood Corporation should report on its consolidated balance sheet.

A. $80

B. $40

C. $60

**120.-** Sigma Corp. purchased new equipment to be used in its manufacturing plant. The cost of the equipment was $250,000 including $5,000 freight and $ 12,000 of taxes. In addition to the equipment cost, Sigma paid $ 10,000 to install the equipment and $7,500 to train its employees to use the equipment. Over the asset's life, Sigma paid $35,000 for repair and maintenance. At the end of five years, Sigma extended the life of the asset by rebuilding the equipment's motors at a cost of $85,000. What amounts should be capitalized on Sigma's balance sheet and what amounts should be expensed in the period incurred?

Capitalized Expensed

A. $335,000 52,500

B $260,000 127,500

C . $345,000 42,500

**121.-** Over a 10-month period, Gamma Manufacturing Company expended $2,500 per month to develop software for its own use. For the first three months, Royal could not estimate the probable future benefits of the expenditures. Over the remaining seven months, the expenditures met the capitalization criteria for identifiable intangible assets in accordance with IFRS. The software was completed on time and is in use today. What amount of the software expenditures should Gamma Manufacturing Company capitalize under IFRS and U.S. GAAP?

IFRS GAAP

A. $25,000 $25,000

B. $17,500 $25,000

C. $0.00 $0.00

**122.-** At the beginning of 2018, Beta Corporation entered into business acquisition.

As a result of the acquisition, Brandon reported the following intangible assets:

|  |  |
| --- | --- |
| Patent | $480,000 |
| Franchise agreement | $350,000 |
| Copyright | $150,000 |
| Goodwill | $550,000 |
| Total | $1,530,000 |

The patent expires in 12 years. The franchise agreement expires in 7 years but can be renewed indefinitely at a minimal cost. The copyright is expected to be sold at the end of 20 years for $30,000. Use the straight-line amortization method to calculate the total carrying value of Beta's intangible assets at the end of the year.

A. $1,484,000

B. $1,524,000

C. $1,490,000

**123.-**Sigma Associates is a book publishing firm preparing and presenting its financial statements in accordance with U.S. GAAP. In the current year Sigma sold a printing unit for $2,056,000. A financial analyst has collected selective financial information for the purpose of analysis:

|  |  |
| --- | --- |
| Beginning balance equipment | $4,560,000 |
| Ending balance equipment | $3,120,000 |
| Capital expenditures | $14,980 |
| Annual Depreciation expense | $44,870 |
| Beginning balance accumulated depreciation | $980,000 |
| Ending balance accumulated depreciation | $1,015,000 |
| Remaining useful life of equipment sold | 3 years |

The gain on the sale of the unit is closest to:

A. $601,020.

B. $610,890.

C. $1,445,110.

# CHAPTER 7 – INCOME TAX

**124.**- Epsilon Company purchased a piece of equipment for $6,000 with the following information provided:

* Revenue will increase by $15,000 per year.
* The equipment has a 3-year life expectancy and no salvage value.
* The firm's tax rate is 30%.
* Straight-line depreciation is used for financial reporting and double declining balance is used for tax purposes.

Calculate the incremental income tax expense for financial reporting for year 1 and year 2.

Year 1 Year 2

A, $3,900 $3,900

B. $3,300 $4,100

C. $600 $-200

**125.-** In 2018, Kappa Ltd. received $80,000 cash from a customer for goods that it could not deliver until the next year and established a liability for unearned revenue. Kappa reports under U.S. GAAP, faces a 40% tax rate, and is located in a tax jurisdiction where unearned revenue is taxed as received. On their balance sheet for 2018, what change in deferred tax should Kappa record as a result of this transaction?

A. There is no effect on deferred tax items from this transaction.

B. A deferred tax liability of $32,000.

C. A deferred tax asset of $32,000

**126.-** Omicron Company purchased a new pizza oven for $12,676. It will work for 5 years and has no salvage value. The tax rate is 41%, and annual revenues are constant at $7,192. For financial reporting, the straight-line depreciation method is used, but for tax purposes depreciation is 35% of original cost in years 1 and 2 and the remaining 30% in Year 3. For this question ignore all expenses other than depreciation.

What is the deferred tax liability as of the end of year one?

A. $780.

B. $1,129.

C. $1,909.

**127.-**Omicron Company purchased a new pizza oven for $12,676. It will work for 5 years and has no salvage value. The tax rate is 41%, and annual revenues are constant at $7,192. For financial reporting, the straight-line depreciation method is used, but for tax purposes depreciation is 35% of original cost in years 1 and 2 and the remaining 30% in Year 3. For this question ignore all expenses other than depreciation.

What is the deferred tax liability as of the end of year three?

A. $780.

B. $2,079.

C. $1,029.

**128.-** A firm needs to adjust its financial statements for a change in the tax rate. Taxable income is $80,000 and pre-tax income is $120,000. The current tax rate is 50%, and the new tax rate is 40%. The effect on taxes payable of adjusting the tax rate is closest to:

A. $4,000.

B. $16,000.

C. $8,000.

**129.-** The following information applies to a capital asset of a company:

|  |  |  |  |
| --- | --- | --- | --- |
| **Year Ending** | **2019** | **2018** | **2017** |
| Capital asset | $2,500 | $2,500 | $2,500 |
| Accumulated depreciation | 375 | 250 | 125 |
| Net book value | 2,125 | 2,250 | 2,375 |

At the end of 2019, the expected remaining life of the capital asset, in years, is closest to:

A. 17.

B. 20.

C. 6.

**130.-** A company purchased equipment for $50,000 on 1 January 2017. It is depreciat­ing the equipment over a period of 10 years on a straight-line basis for account­ing purposes, but for tax purposes it is using the declining balance method at a rate of 20%. Given a tax rate of 30%, the deferred tax liability at the end of 2019 is closest to:

A. $6,720.

B. $2,820.

C. $420.

**131.-** The following information is available about a company for its current fiscal year:

|  |  |
| --- | --- |
| Accounting profit (earnings before taxes) | $250,000 |
| Taxable income | $215,000 |
| Tax rate | 30% |
| Income taxes paid in year | $61,200 |
| Deferred tax liability, start of year | $82,400 |
| Deferred tax liability, end of year | $90,650 |

The income tax expense reported on the current year’s statement of earnings is closest to:

A. $72,750.

B. $69,450.

C. $64,500.

**132.-** Omega Company has recently revalued one of its depreciable properties and esti­mates that its remaining useful life will be another 20 years. The applicable tax rate for all years is 30%, and the revaluation of the property is not recognized for tax purposes. Details related to this asset are provided in the following table:

|  |  |  |
| --- | --- | --- |
| **Original Values and Estimates (millions)** | **Accounting Purposes** | **Tax Purposes** |
| Acquisition cost in 2015 | $8,000 | $8,000 |
| Depreciation, straight line | 20 years | 8 years |
| Accumulated depreciation, end of 2017 | $1,200 | $3,000 |
| Net balance, end of 2017 | $6,800 | $5,000 |

|  |  |  |
| --- | --- | --- |
| **Re-estimated Values and Estimate, Start of 2018** | | |
| Revaluation balance, start of 2018 | $10,000 | Not applicable |
| New estimated life | 20 years | - |

The deferred tax liability related to this asset (in millions) as at the end of 2018 is closest to:

A. $960.

B. $690.

C. $1,650.

**133.-** A company purchased a $2,000 million long-term asset in 2017 when the cor­porate tax rate was 30%.

|  |  |  |
| --- | --- | --- |
| **Asset’s Year-**  **End value** | **2018**  **($ millions)** | **2017**  **($ millions)** |
| Accounting purposes | 1,800 | 1,900 |
| Tax purposes | 1,280 | 1,600 |

On 15 January 2018, the government lowered the corporate tax rate to 25% for 2018 and beyond. The deferred tax liability ($ millions) as of 31 December 2018, is closest to:

A. 130.

B. 231.

C. 156.

**134.-** Delta Company reports income tax expense of $25,000. During the year it reports a decrease in deferred tax liabilities of $12,500 and an increase in deferred tax assets of $5,000. The Delta Company’s taxes payable for the year are closest to:

A. $42,500.

B. $7,500.

C. $17,500.

**135.-** Beta Company reported the following:

• Gross DTA at the beginning of the year: $10,500

• Gross DTA at the end of the year : $11,250

• Valuation allowance at the beginning of the year: $2,700

• Valuation allowance at the end of the year: $3,900

Which of the following statements best describes the expected earnings of the firm? Earnings are expected to:

A, Increase.

B. Decrease.

C. Remain relatively stable.

**136.-** In its first year of operations, a firm produces taxable income of -$ 1 0,000. The prevailing tax rate is 30%. The firm's balance sheet will report a deferred tax:

A. asset of $3,000.

B. asset of $ 10,000.

C. liability of $3,000.

**137.-** Zeta Inc. has a deferred tax asset of $6,000,000. As of December 31, 2020 it is probable that $3,000,000 of the deferred tax asset's value will never be realized because of the uncertainty about future income. Zeta Inc. should:

A. reduce the deferred tax asset account by $3,000,000.

B. establish a valuation allowance of $3,000,000.

C. establish an offsetting deferred tax liability of $3,000,000.

**138.-** Zetha Company owns equipment with a carrying value of $200,000 and a tax base of $ 1 60,000 at year-end. The tax rate is 40%. In this case, the firm will report a DTL of $ 16,000 [($200,000 carrying value - $ 160,000 tax base) x 40%]. The firm also has a DTA of $ 10,000 that was created by bad debt that was recognized as an expense in the income statement but has not yet been deducted on the tax return. The bad debt expense created a DTA of $4,000 [($10,000 tax base - zero carrying value) x 40%]. Calculate the effect on the firm's income tax expense if the tax rate decreases to 30%.

A. $+1,000

B. $-1000

C. $-4,000

**139.-** Assume GAAP. Beta Company reports net income of $800,000 for the year. The table below indicates selected items which were included in net income and their associated tax status.

|  |  |  |
| --- | --- | --- |
|  | **Included in Net Income** | **Tax status** |
| Depreciation Expense | $70,000 | $90,000 allowed for tax purposes |
| Dividend Income | $120,000 | Dividend not taxable |
| Fine related to Environmental damage | $100,000 | Not deductible for tax purposes |
| R&D Expenditures | $50,000 | $20,000 allowed for tax purposes |

Beta’s tax rate is 35%. Beta’s current income taxes payable is closest to:

A. $206,500

B. $276,500

C. $360,500

# CHAPTER 8 – NON-CURRENT (LONG TERM) LIABILITIES

**140.-**Lambda Company issued a bond with a face value of $67,831, maturity of 4 years, and 7% annual-pay coupon, while the market interest rates are 8%.

What is the unamortized discount when the bonds are issued?

A. $1,748.07.

B. $498.58.

C. $2,246.65.

**141.-** A $1,000 bond is issued with an 8% semi-annual coupon rate and 5 years to maturity when market interest rates are 10%. What is the initial liability?

A. 923.

B. 855.

C. 1023.

**142.-** A bond is issued at the end of the year 2018 with an 8% semi-annual coupon rate, 5 years to maturity, and a par value of $1,000. The bond's yield at issuance is 10%. Using the effective interest method, if the yield has decreased to 9% at the end of the year 2019, the balance sheet liability for the bond at the end of the year 2019 is *closest to*:

A. 923.

B. 967.

C. 935.

**143.-**On 1 January 2017, a company that prepares its financial statements according to International Financial Reporting Standards (IFRS) issued bonds with the following features:

* Face value: $20,000,000
* Term: Five years
* Coupon rate: 6% paid annually on 31 December
* Market rate at issue: 4%

The company carries all its bonds at cost. In December 2019, the market rate on similar bonds had increased to 5%, and the company decided to buy back (retire) the bonds after the coupon payment on 31 December. As a result, the gain on retirement reported on the 2019 income statement income is closest to:

A. $340,410.

B. $371,882.

C. $382,556.

**144.-** On 1 January 2018, the market rate of interest on a company’s bonds is 5%, and it issues a bond with the following characteristics:

Face value: $50 million

Coupon rate, paid annually: 4%

Time to maturity: 10 years (31 December 2027)

Issue price (per $100): $92.28

If the company uses International Financial Reporting Standards (IFRS), its interest expense (in millions) in 2018 is closest to:

A. $2.307.

B. $2.386.

C. $1.846.

**145.-** A company that prepares its financial statements according to US GAAP leased a piece of equipment on 1 January 2015. Information relevant to the transaction is as follows:

* Five annual lease payments of $25,000, with the first payment due 1January 2015
* Interest rate on similar company debt is currently 8%
* The fair value of the equipment is $115,000
* Useful life of the equipment is seven years
* The company depreciates other equipment in the same asset class on a straight-line basis

The total expense related to the lease on the company’s 2015 income statement will be closest to:

A. $25,000.

B. $28,185.

C. $22,024.

**146.-** An analyst is comparing the financial leverage of two companies, Alpha and Beta, from the same industry.

* Both companies can borrow at a rate of 4%.
* The two companies are virtually identical except that Company Alpha leases essentially all of its premises; Company Beta owns all of its premises.
* Company Alpha recorded $15,280 (thousand) of lease expenses in 2016, the cur­rent year, ending 31 December. The following excerpt is from the notes to its 2016 financial statements:

Note on leasing Activities: Non-Cancellable Operating

Lease Rentals are Payables on 1 January as follows:

|  |  |
| --- | --- |
| 2017 | $15,280 |
| 2018 | $15,280 |
| 2019 | $15,280 |

To facilitate a fair comparison with Company Beta, the analyst will most likely adjust (in $ thousands) for the operating leases by increasing Company Alpha’s:

A. earnings before tax by $15,280.

B. liabilities by $45,840.

C. liabilities by $44,100.

**147**.- A company issued $2,000,000 of bonds with a 20-year maturity at 96. Seven years later, the company called the bonds at 103 when the unamortized dis­count was $39,000. In the year the bonds were called, the company would most likely report a loss of:

A. $99,000.

B. $138,000.

C. $60,000.

**148.-** Gamma Corporation issued $5,000,000 of five-year bonds at a discount. After three years, the company calls the bonds at 101 when the bond’s carrying value is $4,950,000. The company will realize a:

A. loss of $50,000.

B. gain of $50,000.

C. loss of $100,000.

**149.-**On 1st January 2018, Kappa Inc. purchases a machine for $325,000 and immediately leases the machine through a direct finance lease that requires five annual payments of $56,000 starting from 1st January 2018. The carrying amount is equal to its purchase price and the relevant discount rate is 12%. On 1st January 2019, the reduction in lease receivable is closest to:

A. $23,720.

B. $79,720.

C. $112,000.

**150.-** Alpha Inc. issued a 7% annual-coupon paying bond issue with a face value of $10 million on 1st January 2018 when the market interest rate was 7.7%. Using the effective interest rate method, the interest expense on bonds reported in 31 December 2019 is closest to:

A. $700,000.

B. $744,854.

C. $748,308.

**151.-** Zeta Company entered into a lease agreement to acquire equipment for five years beginning January 1, 2018. The lease requires five annual payments of $35,450 with the first due on January 1, 2018. The useful life of the equipment is six years and the salvage value is zero. The fair value of the equipment is $147,820 and the applicable discount rate is 10%. Zeta Company prepares and presents its financial statements in accordance with U.S. GAAP.

In relation to the lease agreement, in the calendar year 2019, Zeta Company will report:

A. A lease liability of $88,159 on its balance sheet.

B. Rental expense of $35,450 in its income statement.

C. Interest expense of $14,782 in its income statement

**Use the following data to answer Questions 152 through 153**

**152.-** Delta Company conducts part of its operations from leased premises using various finance leases that expire in 10 years. In addition, Mustang leases equipment under no cancelable operating leases. The future minimum lease payments are:

|  |  |  |
| --- | --- | --- |
| **Years** | **Finance Leases** | **Operating Leases** |
| 1 | 570 $ | 125 $ |
| 2 | 570 $ | 110 $ |
| 3 | 530 $ | 90 $ |
| 4 | 290 $ | 70 $ |
| 5 | 260 $ | 65 $ |
| Thereafter ( from years 6 to 10) | 1 000 $ | 250 $ |
| Total minimum lease payments | 3 220 $ | 710 $ |
| Less interest portion | 865 $ | - |
| Present value of future minimum lease payments | 2 355 $ | - |

Calculate the implicit interest rate used by lessee.

A. 7.20%

B. 9.20%

C. 8.20%

**153.-** Assume that Delta Company reported debt of $2,950 and equity of $800 at the inception of the lease. If Delta had treated the operating leases as finance leases, calculate the effects on the debt-to-equity ratio.

A. 4.30

B. 5.30

C. 6.30

**154.-** Assume Omicron Company purchases an asset for $69,302 to lease to Gamma, Inc. for four years with an annual lease payment of $20,000 at the end of each year. At the end of the lease, Gamma will own the asset for no additional payment. The implied interest rate in the lease is 6%. Determine how Omicron should account for the lease payments from Gamma.

A.- Direct financing leasing, and record a lease receivable of $69,302

B.- Operating leasing, and record a lease receivable of $69,302

C.- Direct financing leasing, and record an asset of $69,302

**155.-** On January 1, 2018, Alpha Manufacturing leases a mold making machine for four years. The lease calls for a payment of $ 12,000 per year payable at the beginning of the year. At the end of four years, Alpha will return the machine to the lessor, who will sell it for scrap. The appropriate interest rate is 9%. Alpha depreciates all assets on straight-line basis. For the year ending December 31, 2019, the total expense pertaining to this lease reported on the Alpha's income statement is closest to:

A. $12,494.

B. $11,992.

C. $12,000.

# CHAPTER 1 - UNDERSTANDING INCOME STATEMENT ( Answers)

**1.**-Delta, Inc.'s financial information included the following for its year ended December 31, 2019:

* 160,000 shares of common stock were outstanding for the entire year.
* 18,000 shares of 10%, $100 par value cumulative preferred stock were outstanding for the entire year.
* Common stock dividends paid during the current year were $240,000.
* All preferred stock dividends were paid for the current year.
* Net income was $720,000.

Basic earnings per share for Delta, Inc. for the year ended December 31, 2019 are *closest to:*

A. $4.50.

B. $2.81.

C. $3.38.

***Answer C***

|  |  |
| --- | --- |
| Net Income | $720,000 |
| Deduct: Preferred dividends | ($180,000) |
| **Numerator** | **$540,000** |
| Common stock outstanding all year | 160,000 |
| **Denominator** | **160,000** |
| **Diluted EPS:** | **3.38 $ / share** |

**2.**-Selected information from Gamma Corp.'s financial activities for the year is as follows:

* Net income was $7,650,000.
* 1,100,000 shares of common stock were outstanding on January 1.
* The average market price per share was $62.
* Dividends were paid during the year. The tax rate was 40%.
* 10,000 shares of 6% $1,000 par value preferred shares convertible into common shares at a rate of 20 common shares for each preferred share were outstanding for the entire year.
* 70,000 options, which allow the holder to purchase 10 shares of common stock at an exercise price of $50 per common share, were outstanding the entire year.

Gamma Corp.'s diluted earnings per share (EPS) was *closest* to:

A. $4.91.

B. $5.32.

C. $5.87.

***Answer B***

|  |  |
| --- | --- |
| Net Income | $7,650,000 |
| Deduct: Preferred dividends\* | ($600,000) |
| Add: Preferred dividends saved | $600,000 |
| **Numerator** | **$7,650,000** |
| Common stocks outstanding all year | 1,100,000 |
| Preferred converted | 200,000 |
| New shares needed | 135,484 |
| **Denominator** | **1,435,484** |
| **Diluted EPS:** | **5.33 $/share** |

\*($600,000) = (10,000x0.06x1,000)

* It is dilutive because Average market price > exercise price
* Assume all options are exercised. Shares issued = 700,000
* Proceeds if all options are exercised: $70,000x50=$35,000,000
* Number of shares bought at average price =564,516
* Net increase in common stock:
* Total shares needed = 700,000
* Shares purchased with proceed=564,516
* Number of new shares needed=135,484

**3.-** The Gamma Company had net income of $1 million for the period. There were 1 million shares of widget common stock outstanding for the entire period. If there are 100,000 options outstanding with an exercise price of $40, what is the diluted earnings per share for Gamma common stock if the average price per share over the period was $50?

A. $1.00.

B. $0.98.

C. $0.99.

***Answer B***

|  |  |
| --- | --- |
| Net Income | $1,000,000 |
| **Numerator** | **$1,000,000** |
| Common stocks outstanding all year | 1,000,000 |
| New shares needed | 20,000 |
| **Denominator** | **1,020,000** |
| **Diluted EPS:** | **0.98 $/share** |

* It is dilutive because Average market price > exercise price
* Assume all options are exercised. Shares issued = 100,000
* Proceeds if all options are exercised: $100,000x40=$4,000,000
* Number of shares bought at average price =80,000
* Net increase in common stock:
* Total shares needed = 100,000
* Shares purchased with proceed=80,000
* Number of new shares needed=20,000

**4.-**The Beta Company had 5 million shares outstanding on January 1. On February 15 the board of directors approved a 3 : 2 stock split, effective April 1. What is the weighted average number of shares outstanding for the Bet Company for year-end?

A. 6,875,000 shares.

B. 7,500,000 shares.

C. 5,625,000 shares.

***Answer B***

Shares adjusted for stock split 3 : 2

2020-01-01 Initial shares x 3/2 (12 months) = 90,000,000=5,000,000x3/2x12

Weighted average shares outstanding = 7,500,000=90,000,000/12

**5**.-A company has the following sequence of events regarding their stock:

* One million shares outstanding at the beginning of the year.
* On June 30th, they declared and issued a 10% stock dividend.
* On September 30th, they sold 400,000 shares of common stock at par.

Basic earnings per share at year-end will be computed on how many shares?

A. 1,100,000.

B. 1,000,000.

C. 1,200,000.

***Answer C***

2020-01-01 Initial shares x 1.1 x 12 =13,200,000

2020-09-30 Sold 400,000 x 3 = 1,200,000

Total Weighted shares = 14,400,000

Weighted average shares outstanding = 1,200,000

**6.-**On December 31, 2018, Lambda Corporation had 350,000 shares of common stock outstanding. On September 1, 2019, an additional 150,000 shares of common stock were issued. In addition, Lambda had $10 million of 8% convertible bonds outstanding at December 31, 2018, which are convertible into 200,000 shares of common stock. Net income for 2019 was $3 million. Assuming an income tax rate of 40%, what amount should be reported as the diluted earnings per share for 2019?

A. $5.00.

B. $5.80.

C. $6.00.

***Answer B***

2019-01-01 Initial shares x 1.1 x 12 =13,200,000

2019-09-01 Issued x 4 = 150,000 x 4 =600,000

Total Weighted shares = 4,800,000

Weighted average shares outstanding = 400,000

|  |  |
| --- | --- |
| Net Income | 3 000 000 $ |
| Add: Interest saved | 800 000 $ |
| Less tax 40% | (320 000) $ |
|  | 480 000 $ |
| **Numerator** | **3 480 000 $** |
| Outstanding all year | 400 000 |
| Bond converted | 200 000 |
| **Denominator** | **600 000** |
| **Diluted EPS:** | **5,80 $/share** |

**7.**-Alpha Construction always uses the percentage of completion method of recognizing revenue. During 2019 Alpha signs a contract in the amount of $10 million with the following data available:

|  |  |
| --- | --- |
| Cost incurred to date | $2,200,000 |
| Billings to date | $2,100,000 |
| Cash Collected | $1,700,000 |
| Total cost of project | $8,800,000 |

How much gross profit should Alpha Construction recognize for 2019?

A. -$450,000

B. $300,000

C. $200,000

***Answer B***

Revenue = ($2,200,000/ $8,800,000) x $10,000,000 =$ 2,500,000

Gross profit= $2,500,000 - $2,200,000=$300,000

**8.-**Assume that the exercise price of an option is $10, and the average market price of the stock is $13. Assuming 999 options are outstanding during the entire year, what is the number of shares to be added to the denominator of the diluted earnings per share (EPS)?

A. 231.

B. 999.

C. 768.

***Answer A***

It is dilutive because Average market price > exercise price. Assume all options are exercised, shares issued = 999 Proceeds if all options are exercised $ 999 x 10 = $9,990 and number of shares bought at average price: $9,990/$13=768

Net increase in common stock: Total shares needed 999 - Shares “purchased” with proceeds 768 = Number of new shares needed 231

**9.-**Assume that the exercise price of an option is $11, and the average market price of the stock is $16. Assuming 1,039 options are outstanding during the entire year, what is the number of shares to be added to the denominator of the Diluted EPS?

A. 325.

B. 714.

C. 1039.

***Answer A***

It is dilutive because Average market price > exercise price. Assume all options are exercised. Shares issued = 1,039 Proceeds if all options are exercised $ 1,039 x 11 = $11,429 Number of shares bought at average price: $11,429/16=714

Net increase in common stock: Total shares needed 1,039 - Shares “purchased” with proceeds 714 = Number of new shares needed 325

**10.**-Alpha Company's capital structure was as follows:

|  |  |  |
| --- | --- | --- |
|  | **Dec 31, 2019** | **Dec 31, 2018** |
| Outstanding shares of stock | 200,000 | 200,000 |
| Convertible preferred | 5,000 | 5,000 |
| 6% Convertible Bonds | $500,000 | $500,000 |

During 2019, Alpha Company paid dividends of $2.00 per share on its preferred stock.

* The preferred shares are convertible into 10,000 shares of common stock.
* The 6% bonds are convertible into 15,000 shares of common stock.
* Net income for 2019 was $400,000.
* Assume that income tax rate is 40%.

Alpha's basic and diluted earnings per share for 2019 are

Basic EPS Diluted EPS

A. $1.95 $1,95

B. $1,95 $1.86

C. $1.80 $1.86

***Answer B***

|  |  |
| --- | --- |
| Net Income | $400,000 |
| Deduct: Preferred dividend | ($10,000) |
| Add: Preferred dividend saved | $10,000 |
| Add: Interest saved | $30,000 |
| Less tax 40% | ($12,000) |
|  | $18,000 |
| **Numerator** | **$418,000** |
| Common stocks outstanding all year | 200,00 |
| Preferred Converted | 10,000 |
| Bond converted | 15,000 |
| **Denominator** | **225,000** |
| **Diluted EPS:** | **1.86 $/share** |
| **Basic EPS:** | **1.95 $/share** |

Deduct: Preferred dividends =($5,000x2) = ($10,000)

**11.-**An Analyst has gathered the following information about Delta, Inc., for the year:

* Reported net income of $30,000.
* 5,000 shares of common stock and 2,000 shares of 8%, $90 par preferred stock outstanding during the whole year.
* During the year, Delta issued at par, $60,000 of 6.0% convertible bonds, with each of the 60 bonds convertible into 110 shares of the Delta common stock.

If Delta's effective tax rate is 40%, what will Delta report for diluted earnings per share (EPS)?

A. $1.66.

B. $2.36.

C. $1.53.

***Answer C***

|  |  |
| --- | --- |
| Net Income | $30,000 |
| Deduct : Preferred dividend | ($14,400)=(2,000x90x0.08) |
| Add: Interest saved | $3,600=60,000x0.06 |
| Less tax 40% | ($1,140) |
|  | $2,160 |
| **Numerator** | **$17,760** |
| Common stocks outstanding all year | 5,000 |
| Bond converted | 6,600=60x110 |
| **Denominator** | **11,600** |
| **Diluted EPS:** | **1.53 $/share** |

**12.-**The Emmanuel church is building a new church for $2 million on land acquired several years ago. The contractor estimates the cost at $1.3 million and the project is to be completed over a 2-year period with the payments split evenly between the 2 years. During the first year, the total costs incurred were $700,000. During the second year the contractor experienced cost overruns and costs incurred were $1.0 million. Using the percentage-of-completion method, how much revenue and income should the contractor recognize in the second year of the project?

Revenue Income

A, $1,076,923 $376,923

B. $1,000,000 $0

C. $923,077 $-76,923

***Answer C***

Year 1 Year 2

Revenue $1,076,923 $923,077

Cost ($700,000) ($1,000,000)

Income $376,923 ($76,923)

$700,000/$1,300,000 x $2,000,000=$1,076,923

$2,000,000-$1,076,923 =$923,077

**13.-**Delta Corporation has a contract to build a custom test chamber for a client for $100,000. Delta Corporation uses the percentage-of-completion method for accounting and estimates the total costs for the project to be equal to $80,000. Delta Corporation has promised to complete the project within three years. At year-end the customer has paid $60,000, equaling the total amount billed for the year, and total costs incurred to date are $40,000. On the income statement, net income for the year-end will be:

A. $20,000.

B. $10,000.

C. -$10,000.

***Answer B***

**Year 1**

Revenue $50,000 = $40,000/$80,000\*$100,000

Cost ($40,000)

$10,000

**14.-**Selected information from Omega, Inc.'s financial activities in the year 2019 is as follows:

* Net income = $460,000.
* 2,300,000 shares of common stock were outstanding on January 1.
* The average market price per share was $2 and the year-end stock price was $1.50.
* 1,000 shares of 8%, $1,000 par value preferred shares were outstanding on January 1. Preferred dividends were paid in 2019.
* 10,000 warrants, each of which allows the holder to purchase 100 shares of common stock at an exercise price of $1.50 per common share, were outstanding the entire year.

Caledonia's diluted earnings per share for 2019 are *closest* to:

A. $0.180.

B. $0.15.

C. $0.165.

***Answer B***

|  |  |
| --- | --- |
| Net Income | $460,000 |
| Preferred dividends | ($80,000) |
| **Numerator** | **$380,000** |
| Common stocks outstanding all year | 2,300,000 |
| New shares needed | 250,000 |
| **Denominator** | **2,550,000** |
| **Diluted EPS:** | **0.15 $/share** |

\*(80,000) = (10,000x1,000x0.06)

* It is dilutive because Average market price > exercise price
* Assume all options are exercised. Shares issued = 1,000,000 = $10,000 x 100
* Proceeds if all options are exercised =$1,500,000
* Number of shares bought at average price =750,000
* Net increase in common stock:
* Total shares needed = 1,000,000
* Shares purchased with proceed=750,000
* Number of new shares needed=250,000

**15.-**Sigma Company had the following numbers of shares outstanding during the year:

Beginning of the year: 8,000,000 shares

Issued on April 1: 750,000 shares

Paid stock divided of 20% on July 1

Issued on October 1: 100,000 shares

Purchased Treasury stock November 1: 1,000.000 shares

Split 2 for 1 on December 31

Based on this information, what is the weighted number of shares outstanding for the year?

A. 42,444,444.

B. 20,266,667.

C. 20,783,333.

***Answer B***

2020-01-01 Shares outstanding: 115,200,000 = 8,000,000x1.2x12

2020-01-04 Issued on April 1: 8,100,000 = 750,000x1.2x9

2020-01-10 Issued on October 1: 300,000 = 100,000x3

2020-01-11 Purchased on Nov 1: (2,000,000) = 1,000,000 x 1.2 x 9

Total weighted shares = 121,600,000

2020-31-12 Split 2 for 1: 243,200,000 = 121,600,000x2

Weighted Average shares outstanding= 20,266,667 = 243,200,000/12

**16.-**Selected information about a company is as follows:

|  |  |  |
| --- | --- | --- |
|  | **Current 2020** | **Projection 2021** |
|
| Sales | 2200 | 2500 |
| Variable operating costs (% of sales) | 28% | 30% |
| Fixed operating costs | 1400 | 1400 |
| Tax rate | 25% | 25% |
| Dividends paid | 55 | 60 |
| Interest bearing debt at 5% | 500 | 500 |

The forecasted net income (in $ thousands) for next year is *closest* to:

A. 169.

B. 244.

C. 202.

***Answer B***

|  |  |  |
| --- | --- | --- |
| **Forecast the income** | | |
| Sales | 2 500 $ |  |
| Variable costs | (750) $ |  |
| Fixed costs | (1 400) $ |  |
| Interest expenses | (25) $ | =0,05\*500 |
| EBT | 325 $ |  |
| Taxes | (81) $ | =25% of EBT |
| **Net income** | **244 $** |  |

**17.-**The following information is available on a company for the current year.

|  |  |
| --- | --- |
| Net income | $1,000,000 |
| Average number of common shares | 100,000 |
| Details of convertible securities outstanding: |  |
| Convertible preferred shares outstanding | 2,000 |
| Dividend share | $10 |
| Each preferred share is convertible into five shares of common stock | |
| Convertible bonds, $100 face value per bond | $80.000 |
| 8$ coupon | |
| Each bond is convertible into 25 shares of common stock | |
| Corporate tax rate | 40% |

The company’s diluted EPS is closest to:

A. $7.72.

B. $7.57.

C. $7.69.

***Answer A***

|  |  |
| --- | --- |
| Earnings available to earnings | $1,000,000 |
| Deduct: Preferred dividend | ($20,000) |
| Add: Preferred dividends saved | $20,000 |
| Add: Interest saved | $6,400 |
| Less tax 40% | ($2,560) |
|  | $3,840 |
| **Numerator** | **$1,003,840** |
| Outstanding all year | 100,000 |
| Preferred converted | 10,000 |
| Bond converted | 20,000 |
| **Denominator** | **130,000** |
| **Diluted EPS:** | **7.72** |

**18.-**The following information is from a company’s accounting records ($ millions):

|  |  |
| --- | --- |
| Revenues for the Year | 12,500 |
| Total expenses for the year | 10,000 |
| Gains from available-for-sale securities | 1,475 |
| Loss on foreign currency translation adjustments on a foreign subsidiary | 325 |
| Dividends paid | 500 |

The company’s total comprehensive income (in $ millions) is closest to:

A. 1,150.

B. 3,150.

C. 3,650.

***Answer C***

Total comprehensive income = Net income + Other comprehensive income

Net income = Revenue - Expenses = $2,500 million; Other comprehensive income includes gains or losses on AFS securities - Loss on FX Translation and Total comprehensive income = $2,500 million +$1,475 million -$325 million =$3,650 million.

**19.-**Using the data below, an analyst is in the process of comparing two companies (Delta and Gamma) that are in the same industry.

**Company Delta (in $ millions, except per share data)**

|  |  |
| --- | --- |
| Net income | $7,098 |
| Weighted average common shares outstanding | 4,366 |
| Common share dividends | $1,700 |
| Stock price per share at year-end | $41.00 |

**Company Gamma (in $ millions, except per share data)**

|  |  |
| --- | --- |
| Basic EPS | $4.35 |
| Earnings multiple | 21.17× |
| Dividend payout ratio | 25.9% |

Compared with Company Gamma, Company Delta most likely has a higher:

A. price-to-earnings ratio.

B. dividend payout ratio.

C. earnings per share.

***Answer A***

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Calculation** | **Delta** | **Comment** |
| EPS | 7,098/4,366 | 1,63 | Lower than Gamma |
| P/E | 41,00/1,63 | 25,15x | Higher than Gamma |
| Dividend payout | 1,700/7,098 | 24% | Lower than Gamma |

**20.-**The following data are available on Omega Company:

|  |  |
| --- | --- |
| **Metric** | **Omega** |
| Stock price per share | $60.75 |
| Comprehensive income (millions) | $193.0 |
| Other comprehensive income (millions) | $87.6 |
| Common shares outstanding (millions) | $46.5 |

On a net income basis, the company’s P/E is closest to:

A. 10.1.

B. 14.6.

C. 26.8.

***Answer C***

Net income = Comprehensive income - other comprehensive income = $193-$87,6=$105,40 million then Net income per share (EPS)= Net income/Common shares outstanding =$105,4/$46,5=$2,27/ share 🡪 P/E = stock price/EPS =$60,75/$2,27=26,76

**21.-**Assume Alpha Company recognizes contract revenues using the percentage-of-completion method and that it enters into the following five-year contract:

|  |  |
| --- | --- |
| Total Five Year Revenue | $10,000,000 |
|  |  |
| **Annual Costs** | |
| Year 1 | $500,000 |
| Year 2 | $800,000 |
| Year 3 | $900,000 |
| Year 4 | $1,500,000 |
| Year 5 | $1,300,000 |
| Total | $5,000,000 |

Alpha Company’s reported revenue in Year 5 will be:

A. $10,000,000.

B. $2,600,000.

C. $6,300,000.

***Answer B***

Cost in year/Total cost = Annual percent of revenue to recognize

Cost in year/Total cost = $ 1,300,000/$5,000,000=26%

Revenue year 5 = 26% x $10,000,000 = $2,600,000

**22.-** At the beginning of 2019, Kappa Inc. entered into a contract to build a road for the government. The project will be completed in four years. The following information is available about the contract:

* Total revenue $15 million
* Total cost of project $12 million
* Cost incurred during 2019 $2 million

If the outcome of the project cannot be measured reliably, revenue recognized during 2019 under U.S. GAAP and IFRS is most likely:

IFRS GAAP

A. $2 million $2 million

B. None None

C. $2 million None

***Answer: C***

IFRS: Revenue is recognized to the extent of costs incurred during the period

GAAP: The completed contract method is used. No revenue Is recognized

**23**.-An Analyst gathered the following information about a Gamma company that follows U.S. GAAP for year 2018:

* Beginning shareholders’ equity $1,250,000
* Net income $385,000
* Dividends declared $85,000
* Dividends paid $75,000
* Ending shareholders’ equity $1,650,000

The company’s comprehensive income for the year is closest to:

A. $350,000.

B. $485,000.

C. $365,000.

***Answer B***

Beginning shareholder's equity + Net income + Other comprehensive income = Ending shareholder's equity + Dividends declared.

Other comprehensive income = $1,650,000 + $85,000 – $1,250 000 - $385,000 = $100,000 🡪 Comprehensive income = Other comprehensive income + Net income = $485,000

**24.-**The average market price of Omega Inc.’s stock over the year was $40 and the price at the end of the year was $50. The company’s capital structure included:

• Warrants on 10,000 ordinary shares with an exercise price of $35.

• Options on 20,000 ordinary shares with an exercise price of $30.

The number of inferred shares that will be used in the computation of diluted EPS is closest to:

A. 6,250.

B. 19,000.

C. 11,000.

***Answer A***

The warrants and options are dilutive because Average market price > exercise price. Assume all warrants are exercised. Shares issued =10,000 Proceeds if all options are exercised $ 10,000 x 35 = $350,000 Number of shares bought at average price: $35,000/$40=8750

Net increase in common stock: Total shares needed 10,000 - Shares “purchased” with proceeds 8,750 = Number of new shares needed 1,250

Assume all option are exercised. Shares issued =20,000 Proceeds if all options are exercised $ 20,000 x 30 = $600,000 Number of shares bought at average price: $600,000/$40=15,000

Net increase in common stock: Total shares needed 20,000 - Shares “purchased” with proceeds 15,000 = Number of new shares needed 5,000

Then 1,250 + 5,000 = 6,250

**25-** Selected data from Sigma Company's balance sheet at the end of the year follows:

Investment in Zeta Company, at fair value = $150,000

Deferred taxes = $86,000

Common stock, $ 1 par value = $ 550,000

Preferred stock, $ 1 00 par value = $ 175,000

Retained earnings = $893,000

Accumulated other comprehensive income = $46,000

The investment in Zeta Company had an original cost of $ 120,000. Assuming the investment in Beta is classified as available-for-sale, Sigma’s total owners ‘equity at year-end is closest to:

A. $ 1,618,000.

B. $ 1,664,000.

C. $ 1,714,00

***Answer B***

Common stock = $550,000

Preferred stock= $175,000

Retained earnings = $893,000

Other comprehensive income = $46,000

Total=$1,664,000

Note: The $ 30,000 unrealized gain from the investment in Zeta Company is already included in Accumulated other comprehensive income.

**26.-**Two years ago, Epsilon Corp. purchased machinery for $800,000. At the end of last year, the machinery had a fair value of $720,000. Assuming Epsilon uses the revaluation model, what amount, if any, is recognized in Epsilon's net income this year if the machinery's fair value is $810,000?

A. $0.

B. $80,000.

C. $90,000.

***Answer B***

Any recovery is recognized in the income statement = $80,000 and Revaluation surplus recognized in Shareholder’s equity =$10,000

**27*.-***Calculate comprehensive income for Kappa C. Corporation using the selected financial statement data found in the following table.

Triple C. Corporation - Selected Financial Statement Data

|  |  |
| --- | --- |
| Net Income | $1,000 |
| Dividends received from available-for-sale securities | $60 |
| Unrealized loss from foreign currency translation | ($15) |
| Dividends paid | ($110) |
| Reacquire common stock | ($400) |
| Unrealized gain from cash flow hedge | $30 |
| Unrealized loss from available-for-sale securities | ($10) |
| Realized gain on sale of land | $65 |

A. $605

B. $1,005

C. $895

***Answer B***

Comprehensive income = Net income + other comprehensive income

|  |  |
| --- | --- |
| Net Income | $1,000 |
| Unrealized loss from foreign currency translation | ($15) |
| Unrealized gain from cash flow hedge | $30 |
| Unrealized loss from available-for-sale securities | ($10) |
|  | **$1,005** |

The dividends received for available-for-sale securities and the realized gain on the sale of land are already included in net income. Dividends paid and the reacquisitions of common stock are transactions with shareholders, so they are not included in comprehensive income.

**28.-**Assume GAAP. An analyst gathers the following information about Delta Company:

|  |  |
| --- | --- |
| Average market price per share of common stock during 2019 | 40 $ |
| Exercise price per share for options on 50,000 common shares | 50 $ |
| Exercise price per share for warrants on 20,000 common shares | 30 $ |

Using the treasury stock method, the number of incremental shares used to compute diluted earnings per share is closes to:

A. $5,000

B. $15,000

C. $20,000

***Answer A***

* It is dilutive because Average market price > exercise price
* Assume all options are exercised. Shares issued = 20,000
* Proceeds if all options are exercised =$30 x 20,000 = $ 600,000
* Number of shares bought at average price = 15,000
* Net increase in common stock:
* Total shares needed = 20,000
* Shares purchased with proceed=15,000
* Number of new shares needed=5,000

# CHAPTER 2 – BALANCE SHEETS (Answers)

**29.**-What is the net income of a firm that has a return on equity of 12%, a leverage ratio of 1.5, an asset turnover of 2, and revenue of $1 million?

A. $400,000

B. $40,000

C. $36,000

***Answer B***

0.12=NI/1,000,000 x 2 x 1.5 –> NI =40,000

**30.-**Assume that Gamma company has the following portfolio of marketable securities, which were acquired at the end of last year:

|  |  |  |
| --- | --- | --- |
| **Category** | **Original Cost (in €) at the End of Last Year** | **Fair Market Value (in $) at the End of the Current Year** |
| Held for trading | 12,000,000 | 12,500,000 |
| Available for sale | 17,000,000 | 16,000,000 |

If the company reports under IFRS compared with US GAAP, its net income in the current year will most likely be:

A. the same.

B. $500,000 higher.

C. $1,000,000 lower.

***Answer A***

Held for trading or Available for sale are measured at their fair value on the balance sheet. In IFRS and GAAP all gains/losses on held-for-trading securities are reported on the income statements, whereas the unrealized gains/losses on available-for-sale securities are reported on equity.

**31.-** The following information is available for Kappa Company ($):

|  |  |
| --- | --- |
| **December 31, 2018** | |
| Total assets | $100,000 |
| Net income for the year | $4,000 |
| Dividend paid | $0 |

* Assets are equally financed with debt and equity
* 50% of the equity comes from contributed capital

|  |  |
| --- | --- |
| **December 31, 2019** | |
| Total assets | $92,000 |
| Net income (loss) for the year | ($3,000) |

* No new debt or equity issued or repurchased,

In 2019, the company most likely:

A. paid a dividend of $1,000.

B. did not pay a dividend because it incurred a loss.

C. paid a dividend of $5,000.

***Answer C***

|  |  |  |
| --- | --- | --- |
|  | **2018** | **2019** |
| Total assets (data) | 100 000 | 92 000 |
| Total debt (50% in 2018, no change in 2019) | 50 000 | 50 000 |
| Total Equity | 50 000 | 42 000 |
|  |  |  |
| **Equity** |  |  |
| Contributed capital (50% of equity in 2018 | 25 000 | 25 000 |
| but no change in 2019) |  |  |
| Retained Earnings | 25 000 | 17 000 |
| Total Equity | 50 000 | 42 000 |

Opening RE + NI =Retained earnings + Dividends paid

Dividends paid = $25,000 + ($3,000) - $17,000 = $5,000

**32.-** The following table presents excerpts from financial statements for two mer­chandising companies following the format found in each of their annual reports.

|  |  |  |  |
| --- | --- | --- | --- |
| **Company Alpha(US$ millions)** | | **Company Beta (US$ millions)** | |
| **Assets** | | **Assets** | |
| Noncurrent assets | 9,640 | Current assets | 4,333 |
| Current assets | 2,096 | Noncurrent assets | 19,923 |
| Total assets | 11,736 | Total assets | 24,256 |

Which of the companies most likely prepares its financial statements in accor­dance with US GAAP?

A. Only Company Beta

B. Both companies

C. Only Company Alpha

***Answer A***

IFRS: Does not specify the order of presentation of current and noncurrent assets.

GAAP**:** Current assets are presented before long-term assets and current liabilities before long-term ones.

**33.-**Based on the presented information about a company’s trade receivables, the bad debt expense (in $ millions) for 2019 is closest to:

|  |  |  |
| --- | --- | --- |
| **($ millions)** | **2019** | **2018** |
| Accounts receivable, gross | 6,620 | 4,840 |
| Allowance for doubtful accounts | 92 | 56 |
| Write-offs during the year | 84 | 42 |

A. 84.

B. 36.

C. 120.

***Answer C***

Beginning balance allowance for doubtful accounts +bad debt expense = Ending balance allowance for doubtful accounts + write-offs 🡪Bad debt expenses = $92+$84-$56 = $120

**34.-**Epsilon Inc. ships 5 machines to a customer at $5,550 per machine. The total cost for Epsilon Inc. is $26,250 and payment is due in 60 days. No cash changes hands at delivery. The accounting treatment related to this transaction at the time of shipment most likely includes:

A. Accounts receivable and revenue increased by $27,750 and inventory decreased by $26,250.

B. Revenue increased by $5,550, cost of goods sold decreased by $26,250 and cash remains unchanged.

C. Accounts receivable and revenue increased by $27,750 and inventory and cost of goods sold decreased by $26,250.

***Answer A***

At the time of shipment the accounting treatment for Epsilon Inc. is as follows:

* Accounts receivable and revenue increased by $ 27,750
* Inventory decreased by $ 26,250
* Cost of goods sold increased by $ 26,250

**Use the following information to answer Questions 35 and 36**

At the beginning of the year, Alpha Company purchased 1,000 shares of Beta Company for $80 per share. During the year, Company Beta paid a dividend of $4 per share. At the end of the year, Company Beta's share price was $75.

**35.-** What amount should Alpha Company report on its balance sheet at year-end if the investment in Beta Company is considered a trading security. What amount should be reported if the investment is considered an available-for-sale security?

Trading Available-for-sale

A. $75,000 $75,000

B. $75,000 $80,000

C. $80,000 $80,000

***Answer A***

Both securities are reported on the balance sheet at fair values of $ 75,000 ($75 x 1,000 share)

**36.-** What amount of investment income should Alpha Company recognize in its income statement if the investment in Beta Company is considered trading and what amount should be recognized if the investment is considered available-for-sale?

Trading Available-for-sale

A. ($1,000) ($1,000)

B. ($1,000) $4,000

C. ($5,000) $4,000

***Answer B***

Trading: A loss of $ 1.000 = ($ 4 dividend per share x 1000 shares) - ($5 unrealized loss x 1000 shares).

Available for sale: A income of $4,000 ($4 dividend per share x 1,000 shares). Loss is registered in change shareholder's equity

**Use the following data to answer Questions 37 through 39**

Delta Corporation purchased a 6% bond, at par, for $ 1,000,000 at the beginning of the year. Interest rates have recently increased and the market value of the bond declined $20,000. Determine the bond's effect on Delta Corporation's financial statements.

**37.-**If the bond is classified as a *held-to-maturity* security.

Balance Income statement

A. $1,000,000 $60,000

B. $980,000 $60,000

C. $1,000,000 $20,000

***Answer A***

Balance $1,000,000.00

Income statement $60,000.00 Interest income

**38.-**If the bond is classified as a *Trading security*.

Balance Income statement Income statement

A. $1,000,000 $60,000 -$20,000

B. $980,000 $60,000 -$20,000

C. $880,000 $60,000 +$20,000

***Answer B***

Balance $980,000.00

Income statement $60,000.00 Interest income

Income statement -$20,000.00 Unrealized loss

**39.-** If the bond is classified as an Available-for-sale *security*.

Balance Income statement Stockholder’s equity

A. $980,000 $60,000 $20,000

B. $980,000 $60,000 -$20,000

C. $1,000,000 $60,000 -$20,000

***Answer B***

Balance $980,000.00

Income statement $60,000.00 Interest income

Change in stockholder’s equity -$20,000.00 Unrealized loss

# CHAPTER 3 – CASH FLOW STATEMENT (Answers)

**40.-**Use the following information to calculate cash flows from operations using the indirect method.

|  |  |
| --- | --- |
| Net Income | $12,000 |
| Depreciation Expense | $1,000 |
| Loss on sale of machinery | $500 |
| Increase in Accounts Receivable | $2,000 |
| Decrease in Accounts Payable | $1,500 |
| Increase in Income taxes payable | $500 |
| Repayment of Bonds | $3,000 |

A. Increase in cash of $9,500.

B. Increase in cash of $10,500.

C. Increase in cash of $7,500.

***Answer B***

|  |  |
| --- | --- |
| Net Income | $12,000 |
| Depreciation Expense | $1,000 |
| Loss on sale of machinery | $500 |
| Increase in Accounts Receivable | ($2,000) |
| Decrease in Accounts Payable | ($1,500) |
| Increase in Income taxes payable | $500 |
| Cash Flow from operation | $10,500 |

**41.-**Alpha Inc.'s U.S. GAAP balance sheet as of December 31, 2019 included the following information (in $):

31-12-2018 31-12-2019

Accounts Payable 300,000 500,000

Dividends Payable 200,000 300,000

Common Stock 1,000,000 1,000,000

Retained Earnings 700,000 1,000,000

Alpha's net income in 2019 was $800,000. What was Alpha's cash flow from financing (CFF) in 2019?

A. −$300,000.

B. −$500,000.

C. −$400,000.

***Answer C***

Initial Retained Earnings + NI - Dividends declared =Final Retained Earnings

Dividends declared = $700,000+$800,000-$1,000,000= $500,000

Initial Dividends Payable + Dividends declared = Final Dividends Payable + Dividends paid, 🡪 Dividends paid = $200,000 + $500,000 - $300,000 = $400,000

Then CFF in 2019 = - $400,000

**42.-** Gamma Painting Company is a commercial painting contractor. At the beginning of 2019, Gamma's net working capital was $350,000. The following transactions occurred during 2019:

Performed services on Credit: $150,000

Purchased office equipment for cash: $10,000

Recognized salaries expense: $54,000

Purchased paint supplies on credit: $25,000

Consumed paint supplies: $20,000

Paid salaries: 50,000

Collected accounts receivable: 157,000

Recognized straight-line depreciation expense: 2,000

Paid accounts payable: 15,000

Calculate Gamma's working capital at the end of 2019 and the change in cash for the year 2019.

**Woking capital Change in Cash**

A, $416,000 $80,000

B. $414,000 $82,000

C, $416,000 $82,000

***Answer C***

Working capital

WC at the beginning=$350,000

Recognized salaries expense=($54,000)

Performed services on credit=$150,000

Consumed paint supplies=($20,000)

Purchased office equipment for cash\*=($10,000)

Working Capital =$416,000

Change in Cash

Purchased office equipment for cash=($10,000)

Paid salaries=($50,000)

Collected accounts receivable=$157,000

Paid accounts payable=($15,000)

Change in cash=$82,000

**43.-**Beta, Inc.'s financial information includes the following, with "change" referring to the difference from the prior year (in $ millions):

Net Income: 27

Change in Accounts Receivable: +4

Change in Accounts Payable: +1

Change in Inventory: +5

Loss on sale of equipment: -8

Gain on sale of real estate: +4

Change in Retained Earnings: +21

Dividends declared and paid: +4

Beta, Inc.'s cash flow from operations (CFO) in millions was:

A. $23.

B. $27.

C. $15.

***Answer A***

Net Income: 27

Change in Accounts Receivable: -4

Change in Accounts Payable: +1

Change in Inventory: -5

Loss on sale of equipment: +8

Gain on sale of real estate: -4

Cash flow from operations CFO: 23

\*Dividends paid is CFF

\*\*Change in Retained Earning is not CFO

**44.-**Alpha Corp. has the following transactions in 2019.

* Alpha's equipment with a book value of $55,000 was sold for $85,000 cash.
* A parcel of land was purchased for $100,000 worth of Alpha common stock.
* Gamma company paid Alpha preferred dividends of $40,000.
* Alpha declared and paid a $100,000 cash dividend.

Under U.S. GAAP, what is cash flow from financing (CFF) for Alpha for 2019?

A. −$60,000.

B. −$115,000.

C. −$100,000.

***Answer C***

Gain On sale is part of CFO

Purchase of property is CFI

Dividends received is CFO

Dividends paid is CFF

**45.** For 2019, Omicron Company had 73 days of inventory on hand. Omicron would like to decrease its days of inventory on hand to 50. Omicrons' cost of goods sold for 2019 was $100 million. Omicron expects cost of goods sold to be $124.1 million in 2020. Assuming a 365 day year, compute the impact on Omicron' operating cash flow of the *change* in average inventory for 2020.

A. $3.0 million source of cash.

B. $6.3 million source of cash.

C. $3.0 million use of cash.

***Answer A***

Days of inventory= 365/Inventory turnover=365/COGS/(Average Inv.)

73 days of inventory= 365/100/(Average Inv.)🡪Average Inv. 2019=20

50 days of inventory= 365/124.10/(Average Inv.)🡪Average Inv. 2020=17

Source of cash = $20million -$17million = $3milion

**46.-** The following annual financial data are available for a company ( in $ millions ) :

|  |  |
| --- | --- |
| Beginning interest payable | 90.4 |
| Cash paid for interest | 103.3 |
| Ending interest payable | 84.5 |

Interest expense (in millions) for the year is closest to:

A. $97.4.

B. $109.2.

C. $71.6.

***Answer A***

Beginning interest payable + Interest expense = Ending interest payable + cash paid for interest. Interest expense = Ending interest payable -Beginning interest payable + cash paid for interest🡪 Interest expense = 84,5 -90,4 + 103,30 = $97,40

**47.-**Under the indirect method, a US GAAP-compliant company reported total revenue of $359 million, net income of $35 million, a decrease in income tax payable of $16 million, and an increase in interest expense payable of $22 mil­lion. Based on this information, converting to the direct method would result in cash paid for operating expenses of:

A. $330 million.

B. $353 million.

C. $318 million.

***Answer C***

Indirect-to-direct:

Total Operating expenses = Total revenue-net income = $324 million

Total Cash operating expenses = Total operating expenses + Decrease in income tax payable - Increase in interest expense payable = $324 million + $16 million – $22 million = $318 million

**48.-**A firm reported the following financial statement items (in $ millions):

|  |  |
| --- | --- |
| Net income | 2,100 |
| Non-cash charges | 400 |
| Interest expense | 300 |
| Capital expenditures | 210 |
| Working capital expenditures | 0 |
| Net borrowing | 1,600 |
| Tax rate | 40% |

The free cash flow to the firm (FCFF) is closest to:

A. $2,110.

B. $2,470.

C. $2,590.

***Answer B***

FCFF = NI + NCC + Int (1- t) – FCInv - WCInv

FCFF = $ 2,470 million

**49.-** The following financial statement data are available for Omicron Company (in $ thousands):

|  |  |
| --- | --- |
| Net income | 500 |
| Depreciation | 150 |
| Cash flow from operations | 600 |
| Free cash flow to the firm | 300 |
| Beginning total assets | 4,000 |
| Ending total assets | 6,000 |
| Ending cash balance | 50 |
| Book value | 3,000 |

The company’s cash return on assets ratio is closest to:

A. 12%.

B. 10%.

C. 13%.

***Answer A***

Cash return on assets = Cash flow from operation/Average total assets= 600/((6,000+4,000)/2)=12%

**50.-** An analyst gathered the following information from a company’s 2013 financial statements.

* Net income = $24 million
* Non-cash charges = $6 million
* Cash flow from operations = $12 million
* After tax interest paid = $2.6 million
* Capital expenditure = $9.5 million
* Tax rate = 35%

The free cash flow for the firm (FCFF) is closest to:

A. $5.1 million.

B. $8.7 million.

C. $11.1 million.

***Answer A***

FCFF = CFO + After tax interest - CFInv

FCFF = $12 million + $2.6 million -$9,5 million = $5,1 million

**51.-** John Smith is analyzing selective financial information for Upsilon Corp. for the years 2018 and 2019. Fisher Corp. complies with U.S. GAAP.

|  |  |  |  |
| --- | --- | --- | --- |
| **$’000s** | **2019** | **2018** | **Change** |
| Net income | 255 | 207 | +48 |
| Depreciation & amortization | 28 | 20 | +8 |
| Accounts receivable | 180 | 135 | +45 |
| Inventory | 89 | 95 | -6 |
| Accounts payable | 140 | 128 | +12 |
| Interest payable | 56 | 50 | +6 |
| Taxes payable | 48 | 53 | -5 |
| Accumulated depreciation | 128 | 105 | +23 |
| Short-term debt | 107 | 98 | +9 |

Using the indirect method, Fisher Corp.’s 2013 cash flow from operating activities is closest to:

A. $140,000.

B. $257,000.

C. $279,000.

***Answer: B***

|  |  |
| --- | --- |
| **Operating Cash Flow** | **Thousands** |
| Net Income | $255 |
| +Depreciation & amortization | $28 |
| -Increase in accounts receivable | ($45) |
| +Decrease in Inventory | $6 |
| +Increase in accounts payable | $12 |
| +Increase in interest payable | $6 |
| -Decrease in taxes payable | ($5) |
|  | **$257** |

**52.-** An analyst gathered the following information from a company’s 2018 financial statements.

* Net income = $24 million
* Non-cash charges = $6 million
* Cash flow from operations = $12 million
* After tax interest paid = $2.6 million
* Capital expenditure = $9.5 million
* Tax rate = 35%

The free cash flow for the firm (FCFF) is closest to:

A. $5.1 million.

B. $8.7 million.

C. $11.1 million.

***Answer A***

FCFF = CFO + After tax interest - CFInv

FCFF= $12 million + $2.6 million -$9,5 million =$5.1 million

**53.-** Assume U.S. GAAP holds. An analyst gathered the following information about a company for a year 2019:

* Net income $12.5 million
* Depreciation $1.25 million
* Amortization $0.5 million
* Interest expense $3 million
* Net capital expenditure $1.75 million
* Dividends paid $0.25 million
* Working capital investment $1.15 million
* Tax rate 35%

Free cash flow to the firm for the year is closest to:

A. $13.3 million

B. $13.05 million

C. $9.4 million

***Answer: A***

FCFF = NI + NCC + (Int x (1-t))-FCinv - WCInv

FCFF = 12.5 + 1.75 + (3x(1-0.35)) - 1.75 - 1.15 = $13.3 million

**54.-**Using the following information, what is the firm's cash flow from operations?

|  |  |
| --- | --- |
| Net Income | $120 |
| Decrease in accounts receivable | $20 |
| Depreciation | $25 |
| Increase in inventory | $10 |
| Increase in accounts payable | $7 |
| Decrease in wages payable | $5 |
| Increase in deferred tax liabilities | $15 |
| Profit from the sale of land | $2 |

A. $ 158 .

B. $ 170.

C. $ 174 .

***Answer B***

|  |  |
| --- | --- |
| Net Income | $120 |
| Depreciation | $25 |
| Profit from the sale of land | ($2) |
| Increase in inventory | ($10) |
| Increase in accounts payable | $7 |
| Decrease in wages payable | ($5) |
| Decrease in accounts receivable | $20 |
| Increase in deferred tax liabilities | $15 |
| **Cash flow from operations:** | **$170** |

**Assuming U.S. GAAP, use the following data to answer Questions 55 through 57**

|  |  |
| --- | --- |
| Net income | $45 |
| Depreciation | $75 |
| Taxes paid | $25 |
| Interest paid | $5 |
| Dividend paid | $10 |
| Cash received from sale of company building | $40 |
| Sale of preferred stock | $35 |
| Repurchase of common stock | $30 |
| Purchase of machinery | $20 |
| Issuance of bonds | $50 |
| Debt retired through issuance of common stock | $45 |
| Paid off long-term bank borrowings | $15 |
| Profit on sale of building | $20 |

**55.-** Cash flow from operations is:

A. $70.

B. $ 100.

C. $ 120.

***Answer B***

|  |  |
| --- | --- |
| **Cash flow from operations** | |
| 45 $ | NI |
| (20)$ | profit on sale of building |
| 75 $ | Depreciation |
| **100 $** |  |

**56.-** Cash flow from investing activities is:

A. -$30.

B. $20.

C. $50.

***Answer B***

|  |  |
| --- | --- |
| **Cash flow from investing activities** | |
| 40 $ | Cash from sale of building |
| (20)$ | Purchase of machinery |
| **20 $** |  |

57.- Cash flow from financing activities is:

A. $30.

B. $55.

C. $75.

***Answer A***

|  |  |
| --- | --- |
| **Cash flow from financing activities** | |
| 35 $ | Sale of preferred stock |
| 50 $ | Issuance of bonds |
| (15) $ | Principal payment on bank borrowing |
| (30) $ | Repurchased |
| (10) $ | Dividends paid |
| **30 $** |  |

**58.-** Given the following:

Sales=$1,500

Increase in inventory=$100

Depreciation=$150

Increase in accounts receivable=$50

Decrease in accounts payable=$70

After-tax profit margin=25%

Gain on sale of machinery= 30

Cash flow from operations is:

A. $115.

B. $275.

C. $375.

***Answer B***

|  |  |
| --- | --- |
| **Cash Flow from operations:** | |
| Net income ($1,500x0,25) | 375 $ |
| Depreciation | 150 $ |
| Gain on sale of machinery | (30) $ |
| Increase in accounts receivable | (50) $ |
| Decrease in accounts payable | (70) $ |
| Increase in Inventory | (100) $ |
|  | **275 $** |

**59.-** Omega Corporation reported sales revenue of $ 150,000 for the current year. If accounts receivable decreased $ 10,000 during the year and accounts payable increased $4,000 during the year, cash collections were:

A. $ 154,000.

B. $ 160,000.

C. $ 164,000.

***Answer B***

Accounts receivable initial + Sales = Accounts receivable final + cash collections

Cash collections = Sales - (Accounts receivable final - Accounts receivable initial)

Cash collections = Sales - (Accounts receivable final - Accounts receivable initial)

Cash collections = $150,000 - (-$10,000) = $160,000

**60.-** Net income for Gamma Inc. for the year ended December 31, 2019 was $78,000. Its accounts receivable balance at December 31, 2019 was $ 121,000 and this balance was $69,000 at December 31, 2018. The accounts payable balance at December 31, 2019 was $72,000 and was $43,000 at December 31, 2018. Depreciation for 2019 was $ 12,000, and there was an unrealized gain of $15,000 included in 2019 income from the change in value of trading securities. Which of the following amounts represents Gamma Inc.'s cash flow from operations for 2019?

A. $52,000.

B. $67,000.

C. $82,000.

***Answer A***

|  |  |
| --- | --- |
| Net Income | $78,000 |
| Depreciation | $12,000 |
| Unrealized gain | ($15,000) |
| Increase in account receivable | ($52,000) |
| Increase in account payable | $29,000 |
| **Cash Flow Operations 2019** | **$52,000** |

**61.-** Martin, Inc. had the following transactions during 2018:

• Purchased new fixed assets for $75,000.

• Converted $70,000 worth of preferred shares to common shares.

• Received cash dividends of $ 12,000. Paid cash dividends of $21,000.

• Repaid mortgage principal of $ 17,000.

Assuming Martin follows U.S. GAAP, which of the following amounts represents Martin's cash flows from investing and cash flows from financing in 2018, respectively?

Cash flows from investing Cash flows from financing

A. ($5,000) ($21,000)

B. ($75,000) ($21,000)

C. ($75,000) ($38,000)

***Answer C***

|  |  |
| --- | --- |
| 75 000 $ | Purchase of assets - cash for Investing |
| 70 000 $ | Converted of preferred shares - Noncash |
| 12 000 $ | Received dividends - cash from operations |
| 21 000 $ | Paid dividends - cash from financing |
| 17 000 $ | Mortgage repayment - cash from financing |

CFI = ($75,000.00)

CFF = (38,000.00)

**62.** Assume US. GAAP. At the end of the year, Alpha Company sold equipment for $30,000 cash. The company paid $110,000 for the equipment several years ago and had recorded accumulated depreciation of $70,000 at the time of its sale. All else equal, the equipment sale will result in the company’s cash flow from:

A. Investing activities increasing by $30,000

B. Investing activities decreasing by $10,000

C. Operating activities being $10,000 less than net income

***Answer A***

Value of the equipment = $110,000

Accumulated depreciation = ($70,000)

Book value of equip. = $40,000

Loss reduces net income in 10,000 (30.000-40,000)

Cash from operations = NI + $10,000 (loss is added back)

Cash from investing activities = $30,000 (total amount of the proceeds)

**63.-**At the beginning of 2019, a lessee company enters into a new lease agreement this is correctly classified as a finance lease, with the following terms:

|  |  |
| --- | --- |
| Annual lease payments due at the end of the year | 100 000 $ |
| Lease term | 5 years |
| Appropriate discount rate | 12% |
| Depreciation method | straight-line basis |
| Estimated salvage value | $0 |

With respect to the effect of the lease on the company’s financial statement in the first year of the lease, which of the following statement is most accurate? The reduction in the company’s:

A. pre-tax income is $72,096

B. Cash flow from financing is $56,742

C. Cash flow from operations is $72,096

***Answer B***

N=5,I/Y=12%,PMT=$100,000 PV=? FV=0 then PV =$360,477.62

Interest in the first year = $12% x $360,477,62 =$43,257.31

Amortization of the lease obligation = $ 100,000.00-$43,257,31=$56,742.69

Depreciation= $360,477,62/5=$72,095,52 so the total reduction in pre-tax income would be =$43,257,31+$72,095,52=$115,352,83

Cash flow from operations would be reduced by interest only =$43,257.31

Cash flow from financing is equal to the amortization of lease obligation =$56,742.69

**64.-** The exhibit highlights selective financial information from Beta Incorporated's balance sheet and cash flow statement for the years 2019 and 2018. The company uses the direct format preparing its cash flow statement.

|  |  |  |  |
| --- | --- | --- | --- |
| **$ thousands** | **2019** | **2018** | **Change** |
| Waves payable | 48 | 35 | +13 |
| Taxes payable | 169 | 180 | -11 |
| Deferred tax asset | 32 | 30 | +2 |
| Cash paid for income taxes | 78 | 74 | +4 |
| Cash paid for income to employees | 15 | 15 | 0 |

The amount of income tax and wages expense reported by Beta in its income statement for the year 2019 is closest to:

Income tax expense Wages expenses

A. ($5,000) $13,000

B. $67,000 $28,000

C. $89,000 $2,000

***Answer: B***

Beginning income taxes payable + Income tax expenses = Ending income tax payable + Cash paid for income taxes then Income tax expenses = $169,000+$78,000-$180,000= $67,000

Beginning Wages payables + Wages expenses = Ending Wages payables + Cash paid to employees then Wages expenses = $48,000+$15,000-$35,000=$28,000

# CHAPTER 4 – FINANCIAL ANALYSIS TECHNIQUES (Answers)

**65.-**Given the following information about Beta Inc.:

Receivables turnover=10 times.

Payables turnover=12 times.

Inventory turnover=8 times.

What are the average receivables collection period, the average payables payment period, and the average inventory processing period respectively?

Collection Period Payment Period Inventory period

A. 30 37 46

B. 30 37 52

C. 37 47 42

***Answer A***

Average Receivables= 365/Receivables turnover =365/10=37

Average Payables = 365/Payables turnover=365/12=30

Average Inventory = 365/Inventory turnover= 365/8=46

**66.-**Delta Corp. had the following financial results for the fiscal 2019 year:

Current ratio 2.00

Quick ratio 1.25

Current liabilities $100,000

Inventory turnover 12

Gross profit % 25

The only current assets are cash, accounts receivable, and inventory. The balance in these accounts has remained constant throughout the year. Delta's net sales for 2019 were:

A. $1,200,000.

B. $900,000.

C. $300,000.

***Answer A***

1.- Current asset = Cash + Account receivable + Inventory

2.- Current ratio = Current asset/Current liabilities=2

3.- Quick ratio = (Cash + Account receivable)/Current liabilities=1.25

4.- Inventory = 2x100,000 -1.25x100,000=$75,000

5.- Inventory turnover = COGS/Inventory=12

6.- COGS=$900,000

7.- Net Sales =$900,000/0.75=$1,200,000

**67.-** Beta Company has a receivables turnover of 10, an inventory turnover of 5, and a payables turnover of 12. The Beta Company’s cash conversion cycle is closest to:

A. 79 days.

B. 30 days.

C. 37 days.

***Answer A***

Average Receivables= 365/Receivables turnover =365/10=37

Average Payables = 365/Payables turnover=365/12=30

Average Inventory = 365/Inventory turnover= 365/5=73

Cash conversion cycle = 79

**68.-**Consider the following information available for a company for last year:

|  |  |
| --- | --- |
| ROE | 4.74% |
| Net profit margin | 2.60% |
| Revenue | $400,000 |
| Average total assets | $300,000 |

The average shareholder’s equity is closest to:

A. $164,557.

B. $123,418.

C. $219,409.

***Answer C***

ROE= NI/Revenue x Revenue/Average Total Asset x Asset/Average Shareholders’ Equity then: 0.0474 = 0.026 x 400,000/300,000 x 300,000/Average Shareholder’s Equity🡪 Average Shareholder’s Equity =$219,409

**69.-**  The following data are available on a company:

Metric

Working capital: $60 million

Non-current assets: $235 million

Equity: $170 million

Current ratio: 1.75

The company’s financial leverage is closest to:

A. 1.7.

B. 2.2.

C. 1.2.

***Answer B***

Current Assets = X

Current Liabilities = Y

Current ratio = X/Y = 1,75…(1)

Working capital = X -Y =60…(2)

Solving (1) and (2): X=$140 million and Y=$80 million

Financial Leverage = Total asset / Equity = ($140 million +$235 million)/$170 million=2.2

**70.-** Selected information from a company’s recent income statement and balance sheets is presented in the following table.

Selected Financial Information as of 31 December

|  |  |  |
| --- | --- | --- |
| **($ Thousands)** | **2019** | **2018** |
| Sales | 2,240,000 |  |
| Cost of goods (COGS) | 1,320,000 |  |
| Cash and Investment | 210,700 | 191,600 |
| Accounts receivable | 212,800 | 201,900 |
| Inventories | 63,000 | 71,500 |
| Accounts payable | 129,600 | 157,200 |
| Other current liabilities | 130,700 | 182,700 |

The company operates in an industry in which suppliers offer terms of 2/10, net 30. The payables turnover for the average company in the industry is 8.5 times. Which of the following statements is most accurate? In 2019, the company, on average:

A. paid its accounts within the payment terms provided.

B. paid its accounts more promptly than the average firm in the industry.

C. took advantage of early payment discounts.

***Answer B***

Beginning inventory + Purchases = End inventory + COGS

Purchases = $63,000 + $1,320,000 - $71,500 = $1,311,500

Average payables = ($129,600+$157,200)/2=$143,400

Payables turnover=Purchases/Average payables = $1,311,500/$143,400 = 9,15 times; Days in payables = 365/Payables turnover ratio.

Days in payables: Company = 39,90 and Industry = 42,90

**71.-** The following data are available on a company:

|  |  |
| --- | --- |
| **Metric** | **$ thousands** |
| Interest expense and payments | 1,000 |
| Income tax expense | 1,100 |
| Net income | 3,400 |
| Lease payments | 500 |

The company’s fixed charge coverage ratio is closest to:

A. 3.67.

B. 4.00.

C. 2.27

***Answer B***

EBIT = NI + Interest expense + Income tax expense

EBIT = 3,400+1,000+1,100=5,500

Fixed charge coverage ratio = (EBIT + Lease payments)/(Interest payments + Lease payments) and Fixed charge coverage ratio = (5,500+500)/(1,000+500)=4,00

**72.-** Selected information for Sigma Company is provided.

|  |  |
| --- | --- |
|  | **$ millions** |
| Sales | 4,800 |
| Cost of goods sold | 2,880 |
| Purchases | 2,940 |
| Average receivable | 625 |
| Average Inventory | 710 |
| Average payables | 145 |

The company’s cash conversion cycle (in days) is closest to:

A. 84.

B. 138.

C. 120.

***Answer C***

|  |  |  |  |
| --- | --- | --- | --- |
|  | **DSO** | **DOH** | **Days in payables** |
| turnover | 4,800/625=7,68 | 2,880/710=4,06 | 2,940/145=20,3 |
| In days | 365/7,68=48 days | 365/4,06=90 days | 365/20,3=18 days |

Cash conversion cycle = DSO+DOH-Days in payables =48+90-18=120 days

**73.-** The financial leverage ratio of a firm, whose total debt ratio is 54% and debt-to-equity is 1.15, is closest to:

A. 0.47.

B. 0.62.

C. 2.13.

***Answer C***

Total debt ratio x Financial leverage = Total debt-to-equity

Financial leverage = Total debt-to-equity/Total debt ratio

Financial leverage = 1,15 /0,54 =2,13

**74.-** Use the following information for Omicron, Inc.:

• EBIT I revenue = 10%

• Tax retention rate = 60%

• Revenue / assets = 1.8 times

• Current ratio = 2 times

• EBT /EBIT = 0.9 times

• Assets / equity = 1 .9 times

Omicron Inc.'s return on equity is closest to:

A. 10.5%.

B. 14.0%.

C. 18.5%.

***Answer C***

Tax Burden = Tax retention rate = (1-tax rate) =0,60

ROE = EBIT Margin x Interest Burden x Tax Burden x Asset turn over x Leverage

ROE = 0,10 x 0,9 x 0,6 x 1,8 x 1,9 =18.47%

**75.-** The following information is summarized from Omicron, Inc.'s financial statements for the year ended December 31, 2019

• Sales were $800,000.

• Net profit margin was 20%.

• Sales to assets was 50%

• Equity multiplier is 1.6.

• Interest expense was $30,000.

• Dividends declared were $32,000.

Omicron, Inc.'s sustainable growth rate based on results from this period is closest to:

A. 3.2%.

B. 8.0%.

C. 12.8%.

***Answer C***

Sustainable growth rate = Retention rate x ROE

ROE = (Net profit margin)(sales to assets ) ( equity multiplier )= (0,2)(0,5)(1,6)=16%

Retention rate = (1- dividend payout ratio) = 1-(32,000/(0,2\*80000) =80%

Sustainable growth rate =12.80%

**76.-** The following figure provides data for three companies.

|  |  |  |  |
| --- | --- | --- | --- |
| **Growth Analysis data** | | | |
| **Company** | **Alpha** | **Beta** | **Delta** |
| Earnings per share | 3,00 $ | 4,00 $ | 5,00 $ |
| Dividends per share | 1,50 $ | 1,00 $ | 2,00 $ |
| Return on Equity | 0,14 $ | 0,12 $ | 0,10 $ |

Calculate the sustainable growth rate for each company

Alpha Beta Delta

A. 6.00% 7.00% 8.00%

B. 7.00% 9.00% 6.00%

C. 6.00% 9.00% 7.00%

***Answer B***

|  |  |  |
| --- | --- | --- |
|  | **1- (dividends/earnings)** | **g=(1-div/earn) x ROE** |
| Company Alpha | 0,50 | 7,00% |
| Company Beta | 0,75 | 9,00% |
| Company Gamma | 0,60 | 6,00% |

**77.-** Delta Company is a limestone extractor operating in the U.S. The extractor’s chief financial analyst, Carl Douglas, has summarized selective financial information for the years 2017 to 2019 in the exhibit below.

|  |  |  |  |
| --- | --- | --- | --- |
| **$ millions** | **2019** | **2018** | **2017** |
| Operating cash flow | 35,80 | 30,90 | 38,60 |
| EBIT | 20,50 | 2,80 | 25,00 |
| Long-term debt | 12,00 | 10,40 | 8,60 |
| Short-term borrowing | 8,50 | 7,60 | 5,40 |
| Interest payments | 2,20 | 1,60 | 1,00 |
| Lease payments\* | 21,00 | 16,00 | 18,50 |

\*Interest payments represent 1/3 of lease payments

Delta’s fixed charge coverage ratio is the highest in:

A. 2017.

B. 2018.

C. 2019.

***Answer: A***

Fixed charge coverage ratio = (EBIT + Int. Lease payments))/(Interest payments + Int. Lease payments )

Fixed charge coverage ratio 2019 =(20,5 +(21,0x1/3))/(2,20 + (21,0x1/3)) =2,989

Fixed charge coverage ratio 2018 =(22,8 +(16,0x1/3))/(1.60 + (16,0x1/3)) =4,058

Fixed charge coverage ratio 2017 =(25,0 +(18,5x1/3))/(1,00 + (18,5x1/3)) =4,349

# CHAPTER 5 – INVENTORIES (Answers)

**78.-**Kappa Corp. had a beginning inventory of $9,500 (250 units) and made three inventory purchases during the fiscal year:

Purchases Units Total Cost

01/03/2019 400 $14,800

01/07/2019 450 $14,850

01/07/2019 30 units $8,100

01/09/2019 550 $15,950

Kappa Corp. began operations on Jan. 1, 2019. Kappa uses the LIFO method of determining cost of goods sold. First year sales were 1,300 units. The most likely effects of using LIFO inventory costing as compared to FIFO in Kappa’s 2019 financial statements are:

A. higher net income; lower working capital.

B. higher net income; higher working capital.

C. lower net income; lower working capital.

***Answer B***

LIFO

COGS: $48,890 = 15,950 + 8,100 + 14,850 + 270x37

Final Inventory: $14,310 = 130x37 + 9,500

FIFO

COGS: $52,180 = 9,500 + 14,800 + 14,850 + 8,100 +170x29

Final Inventory: $11,020 = 380x29

LIFO NI > FIFO NI and higher WC (LIFO Final Inv. > FIFO Final Inv.)

**79.-** Omega Company uses a periodic inventory system and the FIFO inventory cost method. In the most recent period, Omega had beginning inventory of $4,200, purchases of $1,400, cost of sales $1,300, and ending inventory of $4,300. If Omega had used a perpetual inventory system, its ending inventory would have been:

A. $4,300.

B. $4,200.

C. $4,400.

***Answer A***

FIFO Periodic

Beginning Inventory = $4,200

Purchases= $1,400

COGS = $1,300

Ending inventory = $4,300

FIFO Perpetual

COGS = $1,300

Ending inventory = $4,300

**80.-** Given the following data on a firm's inventory, purchases, and sales:

|  |  |  |
| --- | --- | --- |
|  | **Units** | **Unit Price** |
| Beginning Inventory | 559 | $1.00 |
| Purchases | 785 | $5.00 |
| Sales | 848 | $15.00 |

Cost of goods sold using the first in, first out (FIFO) method is closest to:

A. $2,004.

B. $2,830.

C. $8,730.

***Answer A***

FIFO

COGS = $2,004 = 559\*1+289\*5

**81.-** Given the following data on a firm's inventory, purchases, and sales:

|  |  |  |
| --- | --- | --- |
|  | **Units** | **Unit Price** |
| Beginning Inventory | 559 | $1.00 |
| Purchases | 785 | $5.00 |
| Sales | 848 | $15.00 |

Ending inventory using the first in, first out (FIFO) method is:

A. $3,988.

B. $2,480.

C. $2,356.

***Answer B***

FIFO

Ending inventory =$2,480 =496\*5

COGS=$2004 =559\*1+289\*5

**82.-** Given the following inventory data about Sigma Company:

* Beginning inventory 20 units at $50/unit
* Purchased 10 units at $45/unit
* Purchased 35 units at $55/unit
* Purchased 20 units at $65/unit
* Sold 60 units at $80/unit

What is the inventory value at the end of the period using first in, first out (FIFO)?

A. $3,100.

B. $1,575.

C. $3,475.

***Answer B***

Beginning Inventory = $1,000

Purchases = $3,675 =10x45 + 35x55 + 20x65

COGS= $3,100 = 20x50 +10x45 + 30x55

Ending Inventory = $1,575 = 20x65 + 5x55

**83.-**Given the following inventory data about Kappa Company:

|  |  |  |
| --- | --- | --- |
|  | **Units** | **Unit Price** |
| Beginning Inventory | 709 | $2.00 |
| Purchases | 556 | $6.00 |
| Sales | 959 | $13.00 |

What is gross profit using the FIFO method and LIFO method?

FIFO LIFO

A. $8,325 $8,862

B. $8,862 $9,549

C. $9,549 $8,325

***Answer C***

FIFO

COGS=$2,918=709x2 + 250x6

Gross Profit =$9,549=12,467 – 2,918

LIFO

COGS=$4,142=556x6 + 403x2

Gross Profit =$8,325 =12,467 – 4,142

**84.-** The following financial statement data are available for Omicron Company:

|  |  |
| --- | --- |
| **Metric** | **$ thousands** |
| Net income | 500 |
| Depreciation | 150 |
| Cash flow from operations | 600 |
| Free cash flow to the firm | 300 |
| Beginning total assets | 4,000 |
| Ending total assets | 6,000 |
| Ending cash balance | 50 |
| Book value | 3,000 |

The company’s cash return on assets ratio is closest to:

A. 12%.

B. 10%.

C. 13%.

***Answer A***

Cash return on assets = Cash flow from operation/Average total assets= 600/((6,000+4,000)/2)=12%

**85.-** Omega Inc. sells iPhones. On October 19, it purchased a large number of iPhones at a cost of $90 each. Due to an oversupply of cellphones remaining in the marketplace due to lower than anticipated demand during the Christmas season, the selling price at December 31 is $80 and the replacement cost is $73. The normal profit margin is 5 percent of the selling price and the selling costs are $2 per recorder. Under U.S. GAAP, what is the value of the recorders on December 31?

A. $78.

B. $73.

C. $74.

***Answer C***

Inventory = Min (cost, market value) = Min (cost, replacement cost (between NRV and NRV minus a normal profit) then NRV =80-2=78 and NRV -normal profit = 78-4=74 then min (90, 74) = $74

**86**.- Given the following data on a firm’s inventory, purchases and sales:

|  |  |  |
| --- | --- | --- |
|  | **Units** | **Units Price** |
| Beginning Invent. | 559 | $1.00 |
| Purchases | 785 | $5.00 |
| Sales | 848 | $15.00 |

Cost of goods sold using the weighted average cost method is *closest* to:

A. $2,000.

B. $2,830.

C. $3,990.

***Answer B***

Weighted average cost method: $3.34 = (559x1 + 785x5)/(559+785)

COGS: $2,829.19 =848x3,34

Final Inventory: $1,654.81= (559 + 785 – 848) x 3.34

**87.-**Alpha Company uses the LIFO inventory accounting method. Mary Gebel, president, wants to determine the financial statement impact of changing to the FIFO accounting method. Selected company information follows:

* Year-end inventory: $22,000
* LIFO reserve: $4,000
* Change in LIFO reserve: $1,000
* LIFO cost of goods sold: $18,000
* After-tax income: $2,000
* Tax rate: 40%

Under FIFO, the nursery's ending inventory and after-tax profit for the year would have been:

FIFO Ending Inv. FIFO after tax-profit

A. $18,000 $2,600

B. $26,000 $2,600

C. $26,000 $1,400

***Answer B***

FIFO ending inventory = LIFO inventory year-end + LIFO reserve = $22,000+$4,000=$26,000

COGS FIFO = COGS LIFO - Change in LIFO reserve = $18,000-$1,000=$17,000

FIFO after-tax profit = LIFO after-tax profit + change in LIFO reserve (1-t) =$2,000+$1,000(1-0,4) = $2,600

**88.-** At the end of 2019, Sigma Corporation reported last-in, first-out (LIFO) inventory of $20 million, cost of goods sold (COGS) of $64 million, and inventory purchases of $58 million. If the LIFO reserve was $6 million at the end of 2018 and $16 million at the end of 2019, compute first-in, first-out (FIFO) inventory at the end of 2019 and FIFO COGS for the year ended 2019.

FIFO Inventory FIFO COGS

A. $36 million $54 million

B. $26 million $54 million

C. $36 million $74 million

***Answer A***

FIFO Inventory 2019 = LIFO Inventory 2007 + LIFO reserve 2007= $20 million + $16 million =$36 million

FIFO COGS 2019 = LIFO COGS 2007 - (LIFO reserve 2007- LIFO reserve 2006) =$64 million - ($16 million -$6 million) = $54 million

**89.** During the year, Omega Company (retailer), purchases 1,000 units of inventory at $20.20 per unit. In addition, the following items relate to inventory acquisition and handling during the year.

|  |  |
| --- | --- |
| **Item Description** | **$ thousands** |
| Volume rebate received | 404 |
| Import and sales taxes | 1,950 |
| Transport and transport insurance costs | 325 |
| Storage costs of finished goods | 1,550 |
| Warehouse administrative costs | 3,150 |

The total costs (in thousands) that will be included in inventory are closest to:

A. $24,341.

B. $22,071.

C. $22,766.

***Answer B***

|  |  |
| --- | --- |
| **Cost Determination** | **Thousands** |
| Purchase price | $20,200 |
| Volume rebate | ($404) |
| Import and sales taxes | $1,950 |
| Transport and transport insurance | $325 |
|  | **$22,071** |

Note: Not include storage cost or finished goods and warehouse administrative costs.

**90.-** An analyst wants to compare a company with its industry and gathers the fol­lowing selected financial information for the company:

|  |  |
| --- | --- |
| Current assets including inventory | $260,000 |
| Current liabilities | $80,000 |
| LIFO reserve | $53,000 |

If the industry norm is to use the FIFO method of inventory valuation, the cur­rent ratio of the company that the analyst would use for comparison purposes is closest to:

A. 3.91.

B. 3.25.

C. 2.59.

***Answer A***

Increase current assets by the LIFO reserve

Current ratio = ((260,000+53,000)/80,000) = 3,91

**91.-** A company incurs the following costs related to its inventory during the year:

|  |  |
| --- | --- |
| **Cost** | **$ millions** |
| Purchase price | 100,000 |
| Trade discounts | 5,000 |
| Import duties | 20,000 |
| Shipping of raw materials to manufacturing facility | 10,000 |
| Manufacturing conversion costs | 50,000 |
| Abnormal costs as a result of waste material | 8,000 |
| Storage cost of finished goods prior to shipping to customers | 2,000 |

The amount charged to inventory cost (in millions) is closest to:

A. $177,000.

B. $185,000.

C. $175,000.

***Answer C***

|  |  |
| --- | --- |
| **Cost** | **$ millions** |
| Purchase price | 100 000 |
| minus trade discounts | (5 000) |
| Import duties | 20 000 |
| Shipping of raw materials to manufacturing facility | 10 000 |
| Manufacturing conversion cost | 50 000 |
| Total inventory costs | 175 000 |

**92.-** An analyst wants to compare a company with its industry and gathers the fol­lowing selected financial information for the company:

|  |  |
| --- | --- |
| Current assets including inventory | $260,000 |
| Current liabilities | $80,000 |
| LIFO reserve | $53,000 |

If the industry norm is to use the FIFO method of inventory valuation, the cur­rent ratio of the company that the analyst would use for comparison purposes is closest to:

A. 3.91.

B. 3.25.

C. 2.59.

***Answer A***

Increasing current assets by the LIFO reserve

Current ratio = ((260,000+53,000)/80,000) = 3,91

**93.-** In 2019, the cost of ending inventory reported by Delta Company, a manufacturer of office equipment, was $22 million. Delta Company compiles its financial statements in accordance with IFRS.

* Replacement cost = $20.5 million
* NRV = $21.2 million
* NRV less profit margin = $19.7 million

Based on the data shown, Delta Company would most likely write its inventory down by:

A. $0.8 million.

B. $1.5 million.

C. $2.3 million.

***Answer A***

Inventory = min (cost, NRV) = min ($22 million; $21,20 million) =$21,20 million

Delta Company would write-down its inventory to $21,20 million and record $0,80 million as an expense in the income statement

**94.-** At the beginning of the year, Omega Company purchased all 500,000 shares of Sub Incorporated for $ 15 per share. Just before the acquisition date, Sub's balance sheet reported net assets of $6 million. Parent determined the fair value of Sub's property and equipment was $ 1 million higher than reported by Sub. What amount of goodwill should Parent report as a result of its acquisition of Sub?

A. $0.

B. $500,000.

C. $1,500,000.

***Answer B***

Purchase price = $15 X 500,000 shares = $7,500,00

Fair value of net assets = $6,000,000 book value + $1,000,000 = $7,000,000

Goodwill = $7,500,000 - $ 7,000,000 = $ 500,000

**95.-** Bombardier Inc. a snowmobile manufacturer, uses LIFO inventory system. LIFO begins the year with an inventory of 3,000 snowmobiles, at a carrying cost of $4,000 each. In January, the company sells 2,000 snowmobiles at a price of $ 10,000 each. In July, the company adds 4,000 snowmobiles to inventory at a cost of $5,000 each. Compared to using a perpetual inventory system, using a periodic system for the firm's annual financial statements would:

A. increase COGS by $2 million.

B. leave ending inventory unchanged.

C. decrease gross profit by $4 million.

***Answer A***

|  |  |  |  |
| --- | --- | --- | --- |
| **Perpetual/LIFO** | **Units** | **Unit. Price** | **Value** |
| Beginning Inv. | 3,000 | $4,000 | $12,000,000 |
| Sales | 2,000 | $10,000 |  |
| Purchases | 4,000 | $5,000 | $20,000,000 |
| Ending Inv. |  |  | $24,000,000 |
| COGS |  |  | $8,000,000 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Periodic/LIFO** | **Units** | **Unit price** | **Value** |
| Beginning Inv. | 3,000 | $4,000 | $12,000,000 |
| Sales | 2,000 | $10,000 |  |
| Purchase | 4,000 | $5,000 | $20,000,000 |
| Ending Inv. |  |  | $22,000,000 |
| COGS |  |  | $10,000,000 |

Under a Periodic system, COGS will be higher by $2 million

**96.-** A LIFO firm reports the following:

• Net income $125,000.

• Beginning inventory $25,000.

• Ending inventory $27,000.

• Beginning LIFO reserve $12,000.

• Ending LIFO reserve $15,000.

• Effective tax rate 40%.

Had the firm used FIFO to account for its inventory, its net income would have been:

A. $123,000.

B. $126,200.

C. $126,800.

***Answer C***

FIFO net income = LIFO net income + (Ending reserve - beginning reserve) x (1-t)

FIFO net income = $125 000 + (($15 000 -$ 12 000) x 60%) = $126,800

**97.-** Lambda, Inc., sells specialized running shoes. At year-end, due to a sudden increase in manufacturing costs, the replacement cost per pair of shoes is $55. The original cost is $43, and the current selling price is $50. The normal profit margin is 10% of the selling price, and the selling costs are $3 per pair. According to U.S. GAAP, which of the following amounts should each pair of shoes be reported on Lambda's year-end balance sheet?

A. $42.

B. $43.

C. $47.

***Answer B***

Inventory = Min (cost, market) = min (cost; replacement cost (between NRV and NRV minus a normal profit)) = min ($43; $47 is between ($47 and $42)) = min ($43; $47). The shoes should be recorded at cost $ 43

**98.-** Alpha Company, which uses LIFO, reported end-of-year inventory balances of $500 in 2018 and $700 in 2019. The LIFO reserve was $200 for 2018 and $300 for 2019. COGS during 2019 was $3,000. Convert 2019 ending inventory and COGS to a FIFO basis.

Ending Invent. 2019 COGS 2019

A. $1,000 $3,000

B. $1,000 $2,900

C. $2,900 $1,000

***Answer B***

* Ending Inventory 2019: Inventory FIFO = Inventory LIFO + IFO reserve = $700+$300=$1,000
* COGS 2019: COGS LIFO = COGS LIFO – (Ending LIFO reserve – Beginning LIFO reserve) = $3,000-($300-$200) = $2,900

**99.-** At the beginning of 2018, Alpha Manufacturing Company had 560 units of inventory as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| **Year Purchased** | **Number of Units** | **Cost per Unit** | **Total Cost** |
| 2014 | 120 | $10 | $1,200 |
| 2015 | 140 | $11 | $1,540 |
| 2016 | 140 | $12 | $1,680 |
| 2017 | 160 | $13 | $2,080 |

Due to a strike, no units were produced during 2018. During 2018, Alpha sold 440 units. In the absence of the strike, Alpha would have had purchased 440 units a cost of $14 for each unit. Compute the artificial (phantom) profit that resulted from the liquidation of inventory.

COGS (with LIFO liquidation) COGS (if replaced the 440 units sold)

A. $5,300 $6,160

B. $6,160 $6,160

C. $6,160 $5,300

***Answer A***

Because of the LIFO liquidation, actual COGS:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Units** | **Cost** |  |
| Beginning inventory | 560 | 6 500 $ |  |
| (+) Purchases | 0 | - $ |  |
| (-) Ending inventory | 120 | 1 200 $ | =$10x120 |
| (=)COGS (Actual) | 440 | 5 300 $ |  |

If the company replaced 440 units sold, COGS would have been:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Units** | **Cost** |  |
| Beginning inventory | 560 | 6 500 $ |  |
| (+) Purchases | 440 | 6 160 $ | =$14 x 440 |
| (-) Ending inventory | 560 | 6 500 $ |  |
| (=)COGS (If replaced) | 440 | 6 160 $ |  |

Due LIFO liquidation, COGS was lower by $ 860 ($5300-$6160)

Then pre-tax profit was higher by $860.

**100.-** Omicron, Inc. Sells I-phones. Per-unit cost information pertaining to Omicron’s inventory is as follows:

Original cost = $210

Estimated selling price = $225

Estimated selling costs = $22

Net realizable value = $203

Replacement cost = $197

Normal profit margin = $12

What are the per-unit carrying values of Omicron’s inventory under IFRS and under U.S. GAAP?

IFRS GAAP

A. $203 $197

B. $197 $203

C. $210 $210

***Answer A***

IFRS

Inventory = Min (cost, net realizable value) = min (cost, est. selling price - est. selling costs) =min ($210, $225-$22=$203) = $203

Inventory written down to $203 in the balance sheet and a $7 loss reported in the income statement.

GAAP

Inventory = Min (cost, market) = min (cost, replacement cost (between NRV and NRV minus a normal profit) = min ($210, $197 because it is between ($203 and $191)) = $197 then Inventory written down to $197 in the balance sheet and a $13 loss reported in the income statement.

**101.-**Assume that in the year after the write-down in the previous example, net realizable value and replacement cost both increase by $ 10. What is the carrying under IFRS and under U.S. GAAP?

IFRS GAAP

A. $210 $197

B. $210 $210

C. $213 $197

***Answer A***

IFRS

Omicron will write-up inventory to $ 210 per unit and recognize a $7 gain in is income statement. The write-up (gain) is limited to the original write-down of $7. The carrying value cannot exceed original cost.

GAAP

No write-up is allowed. The carrying value will remain at $197. Omicron will recognize higher profit when the inventory is sold.

**Use the following data to answer Questions 102 through 103.**

Kappa Industries reports the following using the LIFO inventory costing method at

the end of 2019:

Current assets $ 10 million

Current liabilities $5 million

2018 LIFO reserve $500,000

2019 LIFO reserve $700,000

**102.-** What is the current ratio at the end of 2019 before and after the appropriate adjustment for comparability to a similar firm that reports using the FIFO inventory valuation method?

Before adjustment After adjustment

A. 2.00 2.14

B. 2.00 2.00

C. 2.14 2.00

***Answer A***

Before adjustment, current ratio =CA/CL =2 at the end of 2019

Adding the LIFO reserve to current assets increases the current ratio: CA/CL = (10+0.7)/5=2.14

**103.-** What is the appropriate adjustment to the firm's 2019 COGS to make the firm's income statement comparable to that of a firm that reports under the FIFO method?

A. $ -700,000

B. $+200,000

C. $ -200,000

***Answer C***

The appropriate adjustment is to subtract the increase in the LIFO reserve from COGS. Then COGS should be reduced by $700 000 - $500 000 = $200 000 this will increase gross profit, operating profit and net income compared to LIFO reporting

# CHAPTER 6 – LONG-LIVED ASSETS (Answers)

**104.-**Beta Company buys a delivery vehicle for €60,000. Beta expects to drive the vehicle 400,000 kilometers over 4 years, at the end of which the firm expects to be able to sell the vehicle for $10,000. At the end of Year 2, the vehicle has been driven 250,000 kilometers. If Beta depreciates the vehicle by the units of production method, its carrying value at the end of Year 2 is:

A. 31,250.

B. 15,000.

C. 28,750.

***Answer C***

Year 2

Depreciation = $31,250 = (60,000-10,000) x 250,000/400,000

Carrying value = $28,750 = 60,000-31,250

**105.-**Alpha Records obtains two intangible assets in a business acquisition: legal rights to reproduce songs, valued at $5 million, and a trademark valued at $1 million. The trademark expires in 10 years and can be renewed at a minimal cost. Alpha estimates a 5-year useful life for the song rights. Because much of the songs' economic value is realized in their early years, Alpha uses double-declining balance amortization. Amortization expense in the first year after the acquisition is closest to:

A. $2.2 million.

B. $2.0 million.

C. $2.1 million.

***Answer B***

Legal rights (amortization): $2,000,000 = 5,000,000x2/5

Trademark: It is not amortizable

**106.-**A firm acquires investment property for $3 million and chooses the fair value model for financial reporting. In Year 1 the market value of the investment property decreases by $150,000. In Year 2 the market value of the investment property increases by $200,000. On its financial statements for Year 2, the firm will recognize a:

A. 150,000 increase in shareholders' equity.

B. 200,000 gain on its income statement.

C. 150,000 gain on its income statement and a $50,000 revaluation surplus in shareholders' equity

***Answer B***

In the fair value model there is not revaluation surplus concept. Gains/losses are recognized in the income statement.

**107.-** Kappa Company purchased inventory on January 1, 2018, for $600,000. On December 31, 2018, the inventory had a net realizable value of $550,000 and a replacement cost of $525,000, which is also the NRV less the normal profit margin. What would be the carrying value of the inventory on the company's December 31, 2018, balance sheet prepared under?

IFRS GAAP

1. $525,000 $550,000
2. $525,000 $525.000
3. $550,000 $525,000

***Answer C***

**IFRS**

Inventory = min (cost, NRV) = min ($600,000; $550,000) = $550,000

**GAAP**

Inventory = min (cost, market value) = min (cost, replacement cost (between NRV and NRV minus a normal profit)) = min ($600,000; $525,000) = $525,000

Where NRV = $550,000 and NRV - normal profit = $525,000

**108.-** Because of significant changes in the marketplace, the demand for a company’s product has fallen and is not expected to recover to previous levels. The follow­ing information is related to the patent under which the product is produced:

|  |  |
| --- | --- |
| **Item Description** | **$ thousands** |
| Carrying value amount | 36,000 |
| Undiscounted expected future cash flows | 38,000 |
| Present value of expected future cash flows | 32,000 |
| Fair value if sold | 34,000 |
| Costs to sell | 4,000 |

Which of the following statements is most accurate? The patent is impaired under:

A. IFRS only.

B. Both IFRS and US GAAP.

C. US GAAP only.

***Answer A***

IFRS

Higher of:

1.- PV of expected future cash flow $32,000

2.- Fair value minus cost to sell $30,000

Recoverable amount of $ 32,000 < 36,000 Carrying value, therefore this set is impaired and should be written down.

GAAP

carrying value of $ 36,000 < undiscounted expected future cash flow of $ 38,000

In this case the patent is not impaired.

**109.-** At the start of the year, a company acquired new equipment at a cost of $50,000, estimated to have a three-year life and a residual value of $5,000. If the company depreciates the asset using the double declining balance method, the depreciation expense that the company will report for the third year is closest to:

A. $3,328.

B. $555.

C. $3,705.

***Answer B***

1.- Double Declining balance method of Depreciation:

|  |  |  |  |
| --- | --- | --- | --- |
| **Year** | **Net book value/ Start of year** | **Depreciation** | **Net book value / End of year** |
| 1 | $50,000 | $33,333 | $16,667 |
| 2 | $16,667 | $11,111 | $5,555 |
| 3 | $5,555 | $555 | $5,000 |

2.- Alternative calculation = 50,000(1-0,66667) x (1-0,66667) = $5,555 then depreciation = $5,555-$5,000=$555

**110.-** A company acquires equipment costing $100,000 with a four-year depreciable life and no salvage value. The planned annual production is 100, 200, 400, and 300 units, respectively. Under the units-of-production depreciation method, the Year 4 depreciation expense is closest to:

A. $30,000.

B. $12,500.

C. $25,000.

***Answer A***

Depreciation Expense year 4 = Depreciable cost x (Production year 4/Total production) then Depreciation Expense year 4 = $100,000 x (300/1000) = $30,000

**111.-** The following financial statement data are available for Omicron Company (in $ Thousands):

|  |  |
| --- | --- |
| Net income | 500 |
| Depreciation | 150 |
| Cash flow from operations | 600 |
| Free cash flow to the firm | 300 |
| Beginning total assets | 4,000 |
| Ending total assets | 6,000 |
| Ending cash balance | 50 |
| Book value | 3,000 |

The company’s cash return on assets ratio is closest to:

A. 12%.

B. 10%.

C. 13%.

***Answer A***

Cash return on assets = Cash flow from operation/Average total assets= 600/((6,000+4,000)/2)=12%

**112.-** A company owns an office building that it purchased in 2015 for $1,000,000. The real estate market has been volatile in the last few years. The company uses the revaluation model as allowed by IFRS, and the following table shows the building’s fair market values since 2015:

|  |  |
| --- | --- |
| **Year** | **Fair Market Value ($ thousands)** |
| 2015 | 1,000 |
| 2016 | 600 |
| 2017 | 800 |
| 2018 | 1,300 |

The net impact (in thousands) on the 2018 net income will most likely be an increase of:

A. $200.

B. $500.

C. $300.

***Answer A***

|  |  |
| --- | --- |
| **Income statement** | **Equity** |
| Reverse the losses | Revaluation surplus |
| $1000-$800=$200 | $1300-$1000=$300 |

**113.-** On January 1, 2019 Omega Inc. purchased an image processing unit for $250,000. The estimated useful life and residual value of the unit were eight years and $85,000 respectively. In the same year Omega Inc. reported operating profit of $650,000.

Relative to the straight-line method, in 2019, the double declining depreciation method will produce an operating profit that is:

A. $20,625 lower.

B. $41,875 lower.

C. $17,500 higher.

***Answer: B***

Depreciation expense (straight-line) = ($250,000 - $85,000)/8= $20,625

Depreciation expense (double declining) = 1/8 x 2 x $250,000 = $62,500

In 2019 the depreciation expense will be higher and operating profit lower by $ 41,875 =$62,500 - $20,625 under the double declining method

**114.-** Gamma Corporation has created employee goodwill by reorganizing its retirement benefit package. An independent management consultant estimated the value of the goodwill at $2 million. In addition, Gamma Corporation recently purchased a patent that was developed by a competitor. The patent has an estimated useful life of five years. Should Gamma report the goodwill and patent on its balance sheet?

Goodwill Patent

A. Yes No

B. No Yes

C. No No

***Answer B***

Goodwill developed internally is expensed as incurred. The patent is reported on the balance sheet.

**115.-** At the beginning of 2019, Alpha Corp. incurred $200,000 of research costs and $ 100,000 of development costs to create a new patent. The patent is expected to have a useful life of 40 years with no salvage value. Calculate the carrying value of the patent at the end of 2019, assuming Alpha follows U.S. GAAP.

A. $0.

B. $97,500.

C. $292,500.

***Answer A***

Under GAAP, R&D is expensed at the end of the year. Carrying value of the patent = $0

**116.-** A firm recently recognized a $ 15,000 loss on the sale of machinery used in its manufacturing operation. The original cost of the machinery was $ 1 00,000 and the accumulated depreciation at the date of sale was $60,000. What amount did the firm receive from the sale?

A. $25,000.

B. $45,000.

C. $85,000.

***Answer A***

Carrying value = $100,000-$60,000=$40,000

Sale proceeds – Carrying value = -$15,000

Sale proceeds = -$15,000 + $40,000 = $25,000

**117.-** Compute the remaining useful life of the following asset:

Original cost = $1,500,000

Accumulated depreciation = $675,000

Straight-line depreciation expense = $225,000

A. 3.0 years.

B. 3.7 years.

C. 6.7 years.

***Answer B***

Remaining useful life = carrying value/depreciation expense = ($1,500 000-$675000)/225 000 =3.7 years.

**118.-** Information related to equipment owned by Kappa Company follows:

Original cost = $900,000

Accumulated depreciation to date = $100,000

Expected future cash flows = $825,000

Fair value = $790,000

Value in use = $785,000

Selling costs = $30,000

Assuming Kappa Company will continue to use the equipment, test the asset for impairment under both IFRS and U.S. GAAP, then carrying value are:

IFRS GAAP

A. $800,000 $825,000

B. $785,000 $800,000

C. $800,000 $825,000

***Answer B***

Carrying value = Original cost - accumulated depreciation = $900 000 - $100 000= $800,000

IFRS

Recoverable amount = Max (value in use, fair value less selling costs) =Max ($785 000, $760,000 fair value less selling costs) = $785 000

Asset is written down to $785 000 in the balance sheet and a $15 000 loss reported in the income statement.

GAAP

Expected future cash flows =$825,000

No impairment exits since the $ 825 000 > $ 800 000 (carrying value)

**119.-** Wood Corporation paid $600 million for the outstanding stock of Pine Corporation. At the acquisition date, Pine reported the following condensed balance sheet.

|  |  |
| --- | --- |
| **Pine Corporation**  **Condensed Balance Sheet** | **Book value ( millions)** |
| Current assets | $80 |
| Plant and equipment, net | $760 |
| Goodwill | $30 |
| Liabilities | $400 |
| Stockholder’s equity | $470 |

The fair value of the plant and equipment was $ 120 million more than its recorded book value. The fair values of all other identifiable assets and liabilities were equal to their recorded book values. Calculate the amount of goodwill that Wood Corporation should report on its consolidated balance sheet.

A. $80

B. $40

C. $60

***Answer B***

|  |  |
| --- | --- |
| **Book value** | |
| Current assets | 80 |
| Plant and equipment, net | 880 |
| Liabilities | (400) |
|  | 560 |
| Purchase price | 600 |
| Less : Fair value of net assets | (560) |
| Acquisition goodwill | 40 |

Note: 880=760+120, written up by 120 million.

**120.-** Sigma Corp. purchased new equipment to be used in its manufacturing plant. The cost of the equipment was $250,000 including $5,000 freight and $ 12,000 of taxes. In addition to the equipment cost, Sigma paid $ 10,000 to install the equipment and $7,500 to train its employees to use the equipment. Over the asset's life, Sigma paid $35,000 for repair and maintenance. At the end of five years, Sigma extended the life of the asset by rebuilding the equipment's motors at a cost of $85,000. What amounts should be capitalized on Sigma's balance sheet and what amounts should be expensed in the period incurred?

Capitalized Expensed

A. $335,000 52,500

B. $260,000 127,500

C. $345,000 42,500

***Answer C***

Capitalized

Purchase price $250,000 Including freight and taxes

Installation costs $10,000 Costs necessary to get asset ready

Rebuilt motors $85,000 Extended its life and increase future benefits

Total capitalized $345,000

Costs Expensed when it is incurred

Initial training costs $7,500 Not necessary to get asset ready for use

Repair & mainten. $35,000 Operating expenditures do not extend life of the asset

Cost Expensed $42,500

**121.-** Over a 10-month period, Gamma Manufacturing Company expended $2,500 per month to develop software for its own use. For the first three months, Royal could not estimate the probable future benefits of the expenditures. Over the remaining seven months, the expenditures met the capitalization criteria for identifiable intangible assets in accordance with IFRS. The software was completed on time and is in use today. What amount of the software expenditures should Gamma Manufacturing Company capitalize under IFRS and U.S. GAAP?

IFRS GAAP

A. $25,000 $25,000

B. $17,500 $25,000

C. $0.00 $0.00

***Answer B***

IFRS

Expense: $7,500=2,500x3 before the criteria were met

Capitalization: $17,500=2,500x7 met the criteria

GAAP

Capitalization: $ 25,000=$2,500x10 Software developed in its own

**122.-** At the beginning of 2018, Beta Corporation entered into business acquisition.

As a result of the acquisition, Brandon reported the following intangible assets:

|  |  |
| --- | --- |
| Patent | $480,000 |
| Franchise agreement | $350,000 |
| Copyright | $150,000 |
| Goodwill | $550,000 |
| Total | $1,530,000 |

The patent expires in 12 years. The franchise agreement expires in 7 years but can be renewed indefinitely at a minimal cost. The copyright is expected to be sold at the end of 20 years for $30,000. Use the straight-line amortization method to calculate the total carrying value of Beta's intangible assets at the end of the year.

A. $1,484,000

B. $1,524,000

C. $1,490,000

***Answer A***

|  |  |  |
| --- | --- | --- |
| **Intangible assets** | **Amortization Expenses** | **$** |
| Goodwill | Indefinite-lived asset= not amortized | - |
| Franchise | Can be renewed Indefinitely =not amortized | - |
| Copyright | ($150 000 - $ 30 000)/20 | 6 000 |
| Patent | $480 000/12 | 40 000 |
|  | Amortization Expense--> | 46 000 |

|  |  |
| --- | --- |
| Intangible assets at cost | 1 530 000 |
| Accumulated amortization | (46 000) |
| Intangible assets Net--> | 1 484 000 |

**123.-**Sigma Associates is a book publishing firm preparing and presenting its financial statements in accordance with U.S. GAAP. In the current year Sigma sold a printing unit for $2,056,000. A financial analyst has collected selective financial information for the purpose of analysis:

|  |  |
| --- | --- |
| Beginning balance equipment | $4,560,000 |
| Ending balance equipment | $3,120,000 |
| Capital expenditures | $14,980 |
| Annual Depreciation expense | $44,870 |
| Beginning balance accumulated depreciation | $980,000 |
| Ending balance accumulated depreciation | $1,015,000 |
| Remaining useful life of equipment sold | 3 years |

The gain on the sale of the unit is closest to:

A. $601,020.

B. $610,890.

C. $1,445,110.

***Answer: B***

Beginning balance equipment + Capital expenditures = Ending balance equipment + Cost of equipment sold 🡪 Cost of Equipment sold = $4,560,000+14,980-$3,120,000=$1,454,980

Beginning balance of accumulated depreciation + Depreciation expenses = Ending balance accumulated depreciation + Accumulated depreciation of equipment sold

Accumulated depreciation on equipment sold = $980,000+$44,870-$1,015,000=$9,870

Net book value of equipment sold + $1,454,980-$9,870=$1,445,110

Gain on sale =$2,056,000-$1,445,110=$610,890

# CHAPTER 7 – INCOME TAX (Answers)

**124.**- Epsilon Company purchased a piece of equipment for $6,000 with the following information provided:

* Revenue will increase by $15,000 per year.
* The equipment has a 3-year life expectancy and no salvage value.
* The firm's tax rate is 30%.
* Straight-line depreciation is used for financial reporting and double declining balance is used for tax purposes.

Calculate the incremental income tax expense for financial reporting for years 1 and year 2.

Year 1 Year 2

A, $3,900 $3,900

B. $3,300 $4,100

C. $600 $-200

***Answer A***

|  |  |  |  |
| --- | --- | --- | --- |
| **Tax Reporting** | | | |
| **Year** | **1** | **2** | **3** |
| Revenue | 15 000 $ | 15 000 $ | 15 000 $ |
| Depreciation | 4 000 $ | 1 333 $ | 667 $ |
| Taxable income | 11 000 $ | 13 667 $ | 14 333 $ |
| Taxable payable | (3 300) $ | (4 100) $ | (4 300) $ |
|  | 7 700 $ | 9 567 $ | 10 033 $ |
|  | | | |
| **Financial Accounts** | | | |
| **Year** | **1** | **2** | **3** |
| Revenue | 15 000 $ | 15 000 $ | 15 000 $ |
| Depreciation | 2 000 $ | 2 000 $ | 2 000 $ |
| Pre-tax income | 13 000 $ | 13 000 $ | 13 000 $ |
| Tax expenses | (3 900) $ | (3 900) $ | (3 900) $ |
| Net income | 9 100 $ | 9 100 $ | 9 100 $ |
| BTL | 600 $ | 400 $ | * $ |
| Increment. Income Tax Expe. | 3,900 $ | 3,900 $ | - $ |

**125.-** In 2018, Kappa Ltd. received $80,000 cash from a customer for goods that it could not deliver until the next year and established a liability for unearned revenue. Kappa reports under U.S. GAAP, faces a 40% tax rate, and is located in a tax jurisdiction where unearned revenue is taxed as received. On their balance sheet for 2018, what change in deferred tax should Kappa record as a result of this transaction?

A. There is no effect on deferred tax items from this transaction.

B. A deferred tax liability of $32,000.

C. A deferred tax asset of $32,000

***Answer C***

Unearned revenue = $80,000

Tax payable 40% = ($32,000)

Tax expenses = $0

DTA = $32,000 = $0 – ($32,000)

**126.-** Omicron Company purchased a new pizza oven for $12,676. It will work for 5 years and has no salvage value. The tax rate is 41%, and annual revenues are constant at $7,192. For financial reporting, the straight-line depreciation method is used, but for tax purposes depreciation is 35% of original cost in years 1 and 2 and the remaining 30% in Year 3. For this question ignore all expenses other than depreciation.

What is the deferred tax liability as of the end of year one?

A. $780.

B. $1,129.

C. $1,909.

***Answer A***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Tax Reporting** | | | | | |
| **Year** | **1** | **2** | **3** | **4** | **5** |
| Revenue | 7 192 | 7 192 | 7 192 | 7 192 | 7 192 |
| Depreciation | 4 437 | 4 437 | 3 803 | - | - |
| Taxable income | 2 755 | 2 755 | 3 389 | 7 192 | 7 192 |
| Taxable payable | (1 130) | (1 130) | (1 390) | (2 949) | (2 949) |
|  | 1 626 | 1 626 | 2 000 | 4 243 | 4 243 |
|  |  |  |  |  |  |
| **Financial Accounts** | | | | | |
| **Year** | **1** | **2** | **3** | **4** | **5** |
| Revenue | 7 192 | 7 192 | 7 192 | 7 192 | 7 192 |
| Depreciation | 2 535 | 2 535 | 2 535 | 2 535 | 2 535 |
| Pre-tax income | 4 657 | 4 657 | 4 657 | 4 657 | 4 657 |
| Tax expenses | (1 909) | (1 909) | (1 909) | (1 909) | (1 909) |
| Net income | 2 748 | 2 748 | 2 748 | 2 748 | 2 748 |
|  |  |  |  |  |  |
| BTL | 780 | 1 559 | 2 079 | 1 039 | - $ |

**127.-**Omicron Company purchased a new pizza oven for $12,676. It will work for 5 years and has no salvage value. The tax rate is 41%, and annual revenues are constant at $7,192. For financial reporting, the straight-line depreciation method is used, but for tax purposes depreciation is 35% of original cost in years 1 and 2 and the remaining 30% in Year 3. For this question ignore all expenses other than depreciation.

What is the deferred tax liability as of the end of year three?

A. $780.

B. $2,079.

C. $1,029.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Tax Reporting** | | | | | |
| **Year** | **1** | **2** | **3** | **4** | **5** |
| Revenue | 7 192 | 7 192 | 7 192 | 7 192 | 7 192 |
| Depreciation | 4 437 | 4 437 | 3 803 | - | - |
| Taxable income | 2 755 | 2 755 | 3 389 | 7 192 | 7 192 |
| Taxable payable | (1 130) | (1 130) | (1 390) | (2 949) | (2 949) |
|  | 1 626 | 1 626 | 2 000 | 4 243 | 4 243 |
|  |  |  |  |  |  |
| **Financial Accounts** | | | | | |
| **Year** | **1** | **2** | **3** | **4** | **5** |
| Revenue | 7 192 | 7 192 | 7 192 | 7 192 | 7 192 |
| Depreciation | 2 535 | 2 535 | 2 535 | 2 535 | 2 535 |
| Pre-tax income | 4 657 | 4 657 | 4 657 | 4 657 | 4 657 |
| Tax expenses | (1 909) | (1 909) | (1 909) | (1 909) | (1 909) |
| Net income | 2 748 | 2 748 | 2 748 | 2 748 | 2 748 |
|  |  |  |  |  |  |
| **BTL** | **780 $** | **1 559 $** | **2 079 $** | **1 039 $** | **- $** |

***Answer B***

Deferred tax liability at the end of year 3 = $2,079

**128.-** A firm needs to adjust its financial statements for a change in the tax rate. Taxable income is $80,000 and pre-tax income is $120,000. The current tax rate is 50%, and the new tax rate is 40%. The effect on taxes payable of adjusting the tax rate is closest to:

A. $4,000.

B. $16,000.

C. $8,000.

***Answer C***

|  |  |  |
| --- | --- | --- |
| Taxable Income | $80,000 | Tax report |
| Pre-Tax Income | $120,000 | Financial Accounts |
| Tax payable @50% | $40,000 |  |
| Tax payable @40% | $32,000 |  |
| Effect | $8,000 |  |

**129.-** The following information applies to a capital asset of a company:

|  |  |  |  |
| --- | --- | --- | --- |
| **Year Ending** | **2019** | **2018** | **2017** |
| Capital asset | $2,500 | $2,500 | $2,500 |
| Accumulated depreciation | 375 | 250 | 125 |
| Net book value | 2,125 | 2,250 | 2,375 |

At the end of 2019, the expected remaining life of the capital asset, in years, is closest to:

A. 17.

B. 20.

C. 6.

***Answer A***

|  |  |  |
| --- | --- | --- |
| Depreciation | $125 | ($375-$250)=($250-$125) |
| Useful life (years) | 20 | 2,500/25 |
| Remaining useful life | 17 | 20-3 |

Another way to solve this exercise:

Net book value end 2019/Depreciation: $2,215/125=17

**130.-** A company purchased equipment for $50,000 on 1 January 2017. It is depreciat­ing the equipment over a period of 10 years on a straight-line basis for account­ing purposes, but for tax purposes it is using the declining balance method at a rate of 20%. Given a tax rate of 30%, the deferred tax liability at the end of 2019 is closest to:

A. $6,720.

B. $2,820.

C. $420.

***Answer B***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Value for accounting purposes** | | | **Value for taxes purposes** | | |
|  | **Carrying Amount** | **Depreciation** |  | **Carrying Amount** | **Depreciation** |
| 01-01-2017 | 50 000 | 5 000 | 01-01-2017 | 50 000 | 10 000 |
| 31-12-2017 | 45 000 | 5 000 | 31-12-2017 | 40 000 | 8 000 |
| 31-12-2018 | 40 000 | 5 000 | 31-12-2018 | 32 000 | 6 400 |
| 31-12-2019 | 35 000 |  | 31-12-2019 | 25 600 |  |

|  |  |  |  |
| --- | --- | --- | --- |
| 31-12-2019 | 9 400 $ | (35 000-2 600) | Temporary differences |
|  | 2 820 $ | (9400 x 0,30 ) | Differed tax Liabilities |

**131.-** The following information is available about a company for its current fiscal year:

|  |  |
| --- | --- |
| Accounting profit (earnings before taxes) | $250,000 |
| Taxable income | $215,000 |
| Tax rate | 30% |
| Income taxes paid in year | $61,200 |
| Deferred tax liability, start of year | $82,400 |
| Deferred tax liability, end of year | $90,650 |

The income tax expense reported on the current year’s statement of earnings is closest to:

A. $72,750.

B. $69,450.

C. $64,500.

***Answer A***

Income tax expense = (tax rate)( taxable income)+( increase in deferred tax liabilities)🡪 Income tax expense=(30%x$215,000) + ($90,650-$82,400)=$72,750

**132.-** Omega Company has recently revalued one of its depreciable properties and esti­mates that its remaining useful life will be another 20 years. The applicable tax rate for all years is 30%, and the revaluation of the property is not recognized for tax purposes. Details related to this asset are provided in the following table:

|  |  |  |
| --- | --- | --- |
| **Original Values and Estimates (millions)** | **Accounting Purposes** | **Tax Purposes** |
| Acquisition costs in 2015 | $8,000 | $8,000 |
| Depreciation, straight line | 20 years | 8 years |
| Accumulated depreciation, end of 2017 | $1,200 | $3,000 |
| Net balance, end of 2017 | $6,800 | $5,000 |

**Re-estimated Values and Estimate, Start of 2018**

|  |  |  |
| --- | --- | --- |
| Revaluation balance, start of 2018 | $10,000 | Not applicable |
| New estimated life 20 years | |  |

The deferred tax liability related to this asset (in millions) as at the end of 2018 is closest to:

A. $960.

B. $690.

C. $1,650.

***Answer B***

|  |  |  |
| --- | --- | --- |
|  | **Account. Purposes** | **Tax Purposes** |
| Revaluation surplus | (10,000-6,800)=3200 | No revaluation allowed |
| Depreciation | 20 years | 5 years remaining |
| After revaluation 2018 | 10 000 $ | 5 000 $ |
| Depreciation 2018 | 500 $ | 1 000 $ |
| Net balance, end 2018 | 9 500 $ | 4 000 $ |
| Minus revaluation surplus | 3 200 $ | - $ |
| Carrying value for def. tax. | 6 300 $ | 4 000 $ |

Deferred taxes liability=30%x($6,300-$4,000)=$690

**133.-** A company purchased a $2,000 million long-term asset in 2017 when the cor­porate tax rate was 30%.

|  |  |  |
| --- | --- | --- |
| **Asset’s Year-**  **End Value** | **2018**  **($ millions)** | **2017**  **($ millions)** |
| Accounting purposes | 1,800 | 1,900 |
| Tax purposes | 1,280 | 1,600 |

On 15 January 2018, the government lowered the corporate tax rate to 25% for 2018 and beyond. The deferred tax liability ($ millions) as of 31 December 2018, is closest to:

A. 130.

B. 231.

C. 156.

***Answer A***

(1800-1280) x 25%=130

**134.-** Delta Company reports income tax expense of $25,000. During the year it reports a decrease in deferred tax liabilities of $12,500 and an increase in deferred tax assets of $5,000. The Delta Company’s taxes payable for the year are closest to:

A. $42,500.

B. $7,500.

C. $17,500.

***Answer: A***

Income tax expenses = Taxes payable + Change in DTL - Change in DTA

Taxes payable = Income tax expenses - Change in DTL + Change in DTA

Taxes payable = $25,000-(-$12,500) + $5,000 =$42,500

**135.-** Beta Company reported the following:

• Gross DTA at the beginning of the year: $10,500

• Gross DTA at the end of the year : $11,250

• Valuation allowance at the beginning of the year: $2,700

• Valuation allowance at the end of the year: $3,900

Which of the following statements best describes the expected earnings of the firm? Earnings are expected to:

A, Increase.

B. Decrease.

C. Remain relatively stable.

***Answer B***

Valuation allowance increased from $ 2,700 to $ 3,900 it means future earnings are expected to decrease.

**136.-** In its first year of operations, a firm produces taxable income of -$ 10,000. The prevailing tax rate is 30%. The firm's balance sheet will report a deferred tax:

A. asset of $3,000.

B. asset of $ 10,000.

C. liability of $3,000.

***Answer A***

Deferred tax asset = the lost multiplied by the tax rate =$ 10,000 x 30%= $3,000

**137.-** Zeta Inc. has a deferred tax asset of $6,000,000. As of December 31, 2020 it is probable that $3,000,000 of the deferred tax asset's value will never be realized because of the uncertainty about future income. Zeta Inc. should:

A. reduce the deferred tax asset account by $3,000,000.

B. establish a valuation allowance of $3,000,000.

C. establish an offsetting deferred tax liability of $3,000,000.

***Answer B***

A valuation allowance serves to reduce the value of deferred tax asset for the probability that it will not be realized.

**138.-** Zetha Company owns equipment with a carrying value of $200,000 and a tax base of $ 160,000 at year-end. The tax rate is 40%. In this case, the firm will report a DTL of $ 16,000 [($200,000 carrying value - $ 160,000 tax base) x 40%]. The firm also has a DTA of $ 10,000 that was created by bad debt that was recognized as an expense in the income statement but has not yet been deducted on the tax return. The bad debt expense created a DTA of $4,000 [($10,000 tax base - zero carrying value) x 40%]. Calculate the effect on the firm's income tax expense if the tax rate decreases to 30%.

A. $-1,000

B. $-3000

C. $-4,000

***Answer B***

Decrease in tax rate to 30%

New DTL = (($200,000 - $160,000) x 30%)=12 000

Change in DTL = ($12 000 -$16 000) = -$ 4 000

New DTA = ((10, 000 - $0) x 30%)=3,000

Change in DTA = ($ 3 000 - $ 4 000) = -$ 1 000

Income tax expense = taxes payable + Change DTL –Change DTA

Income tax expense decreases by -$4 000 -(-$ 1,000 ) =-$3,000

**139.-** Assume GAAP. Beta Company reports net income of $800,000 for the year. The table below indicates selected items which were included in net income and their associated tax status.

|  |  |  |
| --- | --- | --- |
|  | **Included in Net Income** | **Tax status** |
| Depreciation Expense | $70,000 | $90,000 allowed for tax purposes |
| Dividend Income | $120,000 | Dividend not taxable |
| Fine related to Environmental damage | $100,000 | Not deductible for tax purposes |
| R&D Expenditures | $50,000 | $20,000 allowed for tax purposes |

Beta’s tax rate is 35%. Beta’s current income taxes payable is closest to:

A. $206,500

B. $276,500

C. $360,500

***Answer B***

|  |  |
| --- | --- |
| Net income | $800,000 |
| Add back book depreciation | $70,000 |
| Deduct tax allowed depreciation | ($90,000) |
| Deduct dividend income | ($120,000) |
| Add back fine | 100,000 |
| Add back book R&D | 50,000 |
| Deduct tax allowed R&D | ($20,000) |
| Taxable income | $790,000 |
| Current taxes payable | $276,500 |

Current taxes payable: 35%x$790,000 = $276,500

# CHAPTER 8 – NON-CURRENT (LONG TERM) LIABILITIES (Answers)

**140.-**Lambda Company issued a bond with a face value of $67,831, maturity of 4 years, and 7% annual-pay coupon, while the market interest rates are 8%.

What is the unamortized discount when the bonds are issued?

A. $1,748.07.

B. $498.58.

C. $2,246.65.

***Answer C***

N=4, I/Y=8%; PMT=4,748,17; PV=X; FV=67831 🡪 PV= $65,584.35

Unamortized discount = $67,831.00-$65584.35=$2,246.65

**141.-** A $1,000 bond is issued with an 8% semi-annual coupon rate and 5 years to maturity when market interest rates are 10%. What is the initial liability?

A. 923.

B. 855.

C. 1023.

***Answer A***

N=10, I/Y=5%, PMT=40, PV=X, FV=1000

PV=$923

**142.-** A bond is issued at the end of the year 2018 with an 8% semi-annual coupon rate, 5 years to maturity, and a par value of $1,000. The bond's yield at issuance is 10%. Using the effective interest method, if the yield has decreased to 9% at the end of the year 2019, the balance sheet liability for the bond at the end of the year 2019 is *closest to*:

A. 923.

B. 967.

C. 935.

***Answer C***

N=10; I/Y=5%; PMT=40; PV=X; FV=1,000 🡪PV=$922.78

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sem** | **Beginning Balance** | **Interest** | **PMT** | **PMT-Interest** | **Ending Balance** |
| 1 | $922,78 | $46.14 | $40.00 | $6.14 | $928.92 |
| 2 | $928.92 | $46.45 | $40.00 | $6.45 | $935.36 |

**143.-**On 1 January 2017, a company that prepares its financial statements according to International Financial Reporting Standards (IFRS) issued bonds with the following features:

* Face value: $20,000,000
* Term: Five years
* Coupon rate: 6% paid annually on 31 December
* Market rate at issue: 4%

The company carries all its bonds at cost. In December 2019, the market rate on similar bonds had increased to 5%, and the company decided to buy back (retire) the bonds after the coupon payment on 31 December. As a result, the gain on retirement reported on the 2019 income statement income is closest to:

A. $340,410.

B. $371,882.

C. $382,556.

***Answer C***

1.- Market value on 31 Dec 2019 (market rate = 5% and 2 years remaining)

N=2; I/Y=5%; PMT=1 200 000; PV=X; FV=20 000 000

PV= $20 371 882,09

2.- Book value on 31 Dec 2019

N=2; I/Y=4%; PMT=1 200 000; PV=X; FV=20 000 000

PV= $20,754,437,87

Gain = Book value - Market value = $382,556

**144.-** On 1 January 2018, the market rate of interest on a company’s bonds is 5%, and it issues a bond with the following characteristics:

Face value: $50 million

Coupon rate, paid annually: 4%

Time to maturity: 10 years (31 December 2027)

Issue price (per $100): $92.28

If the company uses International Financial Reporting Standards (IFRS), its interest expense (in millions) in 2018 is closest to:

A. $2.307.

B. $2.386.

C. $1.846.

***Answer A***

PV = ($92,28/100)x50=$46,14 million

Interest Expense = $46,14 x 5.00%=$2,307

**145.-** A company that prepares its financial statements according to US GAAP leased a piece of equipment on 1 January 2015. Information relevant to the transaction is as follows:

* Five annual lease payments of $25,000, with the first payment due 1January 2015
* Interest rate on similar company debt is currently 8%
* The fair value of the equipment is $115,000
* Useful life of the equipment is seven years
* The company depreciates other equipment in the same asset class on a straight-line basis

The total expense related to the lease on the company’s 2015 income statement will be closest to:

A. $25,000.

B. $28,185.

C. $22,024.

***Answer B***

N=5; I/Y=8%; PMT=25 000; PV=X; FV=0 ;(BGN MODE) 🡪PV=$107,803,17

As PV is greater than 90% of 115,000 then this lease would qualify as finance lease under GAAP:

|  |  |  |  |
| --- | --- | --- | --- |
| **Year** | **Beginning**  **Leaseh. value** | **Lease**  **Payments** | **Balance** |
|  | (1) | (2) | (4)=(1-2) |
| 31-12-2015 | 107 803 $ | 25 000 $ | 82 803 $ |
| 31-12-2016 | 89 427 $ | 25 000 $ | 64 427 $ |
| 31-12-2017 | 69 582 $ | 25 000 $ | 44 582 $ |
| 31-12-2018 | 48 148 $ | 25 000 $ | 23 148 $ |
| 31-12-2019 | 25 000 $ | 25 000 $ | (0) $ |

**……**

…continuation

|  |  |  |  |
| --- | --- | --- | --- |
| **Interest** | **Ending**  **Leaseh. value** | **Depreciation** | **Total**  **Expenses** |
| (5)=(4)\*0,08 | (6)=(4)+(5) | (7)=107803,17/5 | (5)+(7) |
| 6 624 $ | 89 427 $ | 21 561 $ | 28 185 $ |
| 5 154 $ | 69 582 $ | 21 561 $ | 26 715 $ |
| 3 567 $ | 48 148 $ | 21 561 $ | 25 127 $ |
| 1 852 $ | 25 000 $ | 21 561 $ | 23 412 $ |
| (0) $ | (0) $ | 21 561 $ | 21 561 $ |

**146.-** An analyst is comparing the financial leverage of two companies, Alpha and Beta, from the same industry.

* Both companies can borrow at a rate of 4%.
* The two companies are virtually identical except that Company Alpha leases essentially all of its premises; Company Beta owns all of its premises.
* Company Alpha recorded $15,280 (thousand) of lease expenses in 2016, the cur­rent year, ending 31 December. The following excerpt is from the notes to its 2016 financial statements:

Note on leasing Activities: Non-Cancellable Operating

Lease Rentals are Payables on 1 January as follows:

|  |  |
| --- | --- |
| 2017 | $15,280 |
| 2018 | $15,280 |
| 2019 | $15,280 |

To facilitate a fair comparison with Company Beta, the analyst will most likely adjust (in $ thousands) for the operating leases by increasing Company Alpha’s:

A. earnings before tax by $15,280.

B. liabilities by $45,840.

C. liabilities by $44,100.

***Answer C***

N=3; I/Y=4%; PMT=15,280; PV=? ; FV=0 ;(BGN MODE)🡪PV=$44,099.53

**147**.- A company issued $2,000,000 of bonds with a 20-year maturity at 96. Seven years later, the company called the bonds at 103 when the unamortized dis­count was $39,000. In the year the bonds were called, the company would most likely report a loss of:

A. $99,000.

B. $138,000.

C. $60,000.

***Answer A***

|  |  |  |
| --- | --- | --- |
| Redemption cost | 2 060 000 $ | 2,000,000x(103/100) |
| carrying amount retired | 1 961 000 $ | 2,000,000-39,000 |
| Lost on redemption | (99 000) $ |  |

**148.-** Gamma Corporation issued $5,000,000 of five-year bonds at a discount. After three years, the company calls the bonds at 101 when the bond’s carrying value is $4,950,000. The company will realize a:

A. loss of $50,000.

B. gain of $50,000.

C. loss of $100,000.

***Answer C***

|  |  |
| --- | --- |
| Call price | $5,050,000 |
| Carrying Amount | $4,950,000 |
| Loss of | ($100,000) |

Call price : $5,050,000=$5,000,000x101/100

**149.-**On 1st January 2018, Kappa Inc. purchases a machine for $325,000 and immediately leases the machine through a direct finance lease that requires five annual payments of $56,000 starting from 1st January 2018. The carrying amount is equal to its purchase price and the relevant discount rate is 12%. On 1st January 2019, the reduction in lease receivable is closest to:

A. $23,720.

B. $79,720.

C. $112,000.

***Answer A***

|  |  |  |
| --- | --- | --- |
| **Year** | **Leasehold**  **value** | **Lease**  **Payments** |
|  | (1) | (2) |
| 01-01-2018 | 325 000 $ | 56 000 $ |
| 01-01-2019 | 269 000 $ | 56 000 $ |

… continuation

|  |  |  |
| --- | --- | --- |
| **Interest** | **Lease Payment - interest** | **Lease Receivable** |
| (3) | (4) =(2)-(3) | (5)=(1)-(4) |
| - $ | 56 000 $ | 269 000 $ |
| 32 280 $ | 23 720 $ | 245 280 $ |

**150.-** Alpha Inc. issued a 7% annual-coupon paying bond issue with a face value of $10 million on 1st January 2018 when the market interest rate was 7.7%. Using the effective interest rate method, the interest expense on bonds reported in 31 December 2019 is closest to:

A. $700,000.

B. $744,854.

C. $748,308.

***Answer C***

N=6; I/Y=7,7%; PMT=700,000; PV=X; FV=$10,000,000 🡪PV=$9,673,432

|  |  |  |
| --- | --- | --- |
| **Semester** | **Beginning**  **Balance** | **Interest** |
| 2 018 | 9 673 432 $ | 744 854 $ |
| 2 019 | 9 718 286 $ | 748 308 $ |

……

…continuation

|  |  |  |
| --- | --- | --- |
| **PMT** | **(Int - PMT)** | **Ending**  **Balance** |
| 700 000 $ | 44 854 $ | 9 718 286 $ |
| 700 000 $ | 48 308 $ | 9 766 594 $ |

**151.-** Zeta Company entered into a lease agreement to acquire equipment for five years beginning January 1, 2018. The lease requires five annual payments of $35,450 with the first due on January 1, 2018. The useful life of the equipment is six years and the salvage value is zero. The fair value of the equipment is $147,820 and the applicable discount rate is 10%. Zeta Company prepares and presents its financial statements in accordance with U.S. GAAP.

In relation to the lease agreement, in the calendar year 2019, Zeta Company will report:

A. A lease liability of $88,159 on its balance sheet.

B. Rental expense of $35,450 in its income statement.

C. Interest expense of $14,782 in its income statement

***Answer: A***

This lease will be recognized as capital lease by Zeta Company, because the lease term is more than 75% of the useful life of the leased asset and the present value of the leased payments are more than 90% of the fair value of the leased asset.

BGN mode N=4; I/Y=10%; PMT=35,450; FV=0; PV = X 🡪 PV= $147,821

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Year** | **Lease liability**  **1 January** | **Lease**  **Payments** | **Interest\*** | **Reduction of**  **lease liability** | **Lease liability**  **31 December** |
| 2018 | 147 821 | 35 450 | - | 35 450 | 112 371 |
| 2019 | 112 371 | 35 450 | 11 237 | 24 213 | 88 158 |

\*Interest (10% accrued in previous year)

**Use the following data to answer Questions 152 through 153.**

**152.-** Delta Company conducts part of its operations from leased premises using various finance leases that expire in 10 years. In addition, Mustang leases equipment under no cancelable operating leases. The future minimum lease payments are:

|  |  |  |
| --- | --- | --- |
| **Years** | **Finance Leases** | **Operating Leases** |
| 1 | 570 $ | 125 $ |
| 2 | 570 $ | 110 $ |
| 3 | 530 $ | 90 $ |
| 4 | 290 $ | 70 $ |
| 5 | 260 $ | 65 $ |
| Thereafter (from years 6 to 10) | 1 000 $ | 250 $ |
| Total minimum lease payments | 3 220 $ | 710 $ |
| Less interest portion | 865 $ |  |
| Present value of future minimum lease payments | 2 355 $ |  |

Calculate the implicit interest rate used by lessee.

A. 7.20%

B. 9.20%

C. 8.20%

***Answer C***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **CF0** | **CF1** | **CF2** | **CF3** | **CF4** | **CF5** | **CF6-CF9** | **CF10** |
| (2 355) | 570 | 570 | 530 | 290 | 260 | 200 | 200 |

IRR =8.20%

**153.-** Assume that Delta Company reported debt of $2,950 and equity of $800 at the inception of the lease. If Delta had treated the operating leases as finance leases, calculate the effects on the debt-to-equity ratio.

A. 4.30

B. 5.30

C. 6.30

***Answer A***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **CF0** | **CF1** | **CF2** | **CF3** | **CF4** | **CF5** | **CF6-CF9** | **CF10** |
| - | 125 | 110 | 90 | 70 | 65 | 50 | 50 |

Using NPV in financial calculator and implicit interest rate of 8.20% -> PV=$509

New debt -to-equity = (2950+509)/800 = 4.3

**154.-** Assume Omicron Company purchases an asset for $69,302 to lease to Gamma, Inc. for four years with an annual lease payment of $20,000 at the end of each year. At the end of the lease, Gamma will own the asset for no additional payment. The implied interest rate in the lease is 6%. Determine how Omicron should account for the lease payments from Gamma.

A.- Direct financing leasing, and record a lease receivable of $69,302

B.- Operating leasing, and record a lease receivable of $69,302

C.- Direct financing leasing, and record an asset of $69,302

***Answer A***

N=4; I/Y=6%; PMT=20 000; PV=? ; FV=0 –>PV=$69,302

Since the present value of lease payments of $69,302 is equal to the carrying value of the asset, Omicron treats the lease as direct financing lease. Omicron removes the leased asset from the balance sheet and records a lease receivable of $ 69,302

**155.-** On January 1, 2018, Alpha Manufacturing leases a mold making machine for four years. The lease calls for a payment of $ 12,000 per year payable at the beginning of the year. At the end of four years, Alpha will return the machine to the lessor, who will sell it for scrap. The appropriate interest rate is 9%. Alpha depreciates all assets on straight-line basis. For the year ending December 31, 2019, the total expense pertaining to this lease reported on the Alpha's income statement is closest to:

A. $12,494.

B. $11,992.

C. $12,000.

***Answer A***

BGN mode N=4; I/Y=9%; PMT=12,000; FV=0; PV = X -🡪PV=42,376.00

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Beginning**  **Value** | **Lease**  **Payments** | **Balance** | **Interest** | **Ending**  **Value** | **Depreciation** | **Total**  **Expenses** |
|  | (1) | (2) | (4)=(1-2) | (5)=(4)\*0,09 | (6)=(4)+(5) | (7)=42376/4 | (5)+(7) |
| 31-12-2018 | 42 376 | 12 000 | 30 376 | 2 734 | 33 110 | 10 594 | **13 328** |
| 31-12-2019 | 33 110 | 12 000 | 21 110 | 1 900 | 23 010 | 10 594 | **12 494** |
| 31-12-2020 | 23 010 | 12 000 | 11 010 | 991 | 12 000 | 10 594 | **11 585** |
| 31-12-2021 | 12 000 | 12 000 | - | - | - | 10 594 | **10 594** |

Total expenses in December 31, 2019 = $12,494