**ACC-405**

**Module 1 Practice Problems and Solutions**

**Problem 1.** Plantation Homes Company is considering the acquisition of Condominiums, Inc. early in 2020. To assess the amount it might be willing to pay, Plantation Homes makes the following computations and assumptions.

Condominiums, Inc. has identifiable assets with a total fair value of $15,000,000 and liabilities of $8,800,000. The assets include office equipment with a fair value approximating book value, buildings with a fair value 30% higher than book value, and land with a fair value 75% higher than book value. The remaining lives of the assets are deemed to be approximately equal to those used by Condominiums, Inc.

Condominiums, Inc.'s pretax incomes for the years 2017 through 2019 were $1,200,000, $1,500,000, and $950,000, respectively. Plantation Homes believes that an average of these earnings represents a fair estimate of annual earnings for the indefinite future. However, it may need to consider adjustments to the following items included in pretax earnings:

Depreciation on buildings (each year) 960,000

Depreciation on equipment (each year) 50,000

Extraordinary loss (year 2019) 300,000

Sales commissions (each year) 250,000

The normal rate of return on net assets for the industry is 15%.

**Required:**

Assume further that Plantation Homes feels that it must earn a 25% return on its investment and that goodwill is determined by capitalizing excess earnings. Based on these assumptions, calculate a reasonable offering price for Condominiums, Inc. Indicate how much of the price consists of goodwill. Ignore tax effects.

Assume that Plantation Homes feels that it must earn a 15% return on its investment, but that average excess earnings are to be capitalized for three years only. Based on these assumptions, calculate a reasonable offering price for Condominiums, Inc. Indicate how much of the price consists of goodwill. Ignore tax effects.

**Solution**

**Part A** Normal earnings for similar firms = ($15,000,000 - $8,800,000) x 15% = $930,000

 Expected earnings of target:

 Pretax income of Condominiums, Inc., 2017 $1,200,000

 Subtract: Additional depreciation on building ($960,000 × 30%) (288,000)

 Target’s adjusted earnings, 2017 912,000

 Pretax income of Condominiums, Inc., 2018 $1,500,000

 Subtract: Additional depreciation on building (288,000)

 Target’s adjusted earnings, 2018 1,212,000

 Pretax income of Condominiums, Inc., 2019 $950,000

 Add: Extraordinary loss 300,000

 Subtract: Additional depreciation on building (288,000)

 Target’s adjusted earnings, 2019 962,000

 Target’s three year total adjusted earnings 3,086,000

 Target’s three year average adjusted earnings ($3,086,000 ÷ 3) 1,028,667

 Excess earnings of target = $1,028,667 - $930,000 = $98,667 per year



 Present value of excess earnings (perpetuity) at 25%: = $394,668 (Estimated Goodwill)

 Implied offering price = $15,000,000 – $8,800,000 + $394,668 = $6,594,668.

**Part B** Excess earnings of target (same as in Part A) = $98,667

 Present value of excess earnings (ordinary annuity) for three years at 15%:

 $98,667 × 2.28323 = $225,279

 Implied offering price = $15,000,000 – $8,800,000 + $225,279 = $6,425,279.

 Note: The sales commissions and depreciation on equipment are expected to continue at the same rate, and thus do not necessitate adjustments.

**Problem 2 – no sample**

**Problem 3 – no sample**

**Problem 4. Hopkins Company** is considering the acquisition of Richfield, Inc. To assess the amount it might be willing to pay, Hopkins makes the following computations and assumptions.

A. Richfield, Inc. has identifiable assets with a total fair value of $6,000,000 and liabilities of $3,700,000. The assets include office equipment with a fair value approximating book value, buildings with a fair value 25% higher than book value, and land with a fair value 50% higher than book value. The remaining lives of the assets are deemed to be approximately equal to those used by Richfield, Inc.

B. Richfield, Inc.'s pretax incomes for the years 2020 through 2022 were $470,000, $570,000, and $370,000, respectively. Hopkins believes that an average of these earnings represents a fair estimate of annual earnings for the indefinite future. However, it may need to consider adjustments for the following items included in pretax earnings:

|  |  |
| --- | --- |
| Depreciation on Buildings (each year)  | 380,000 |
| Depreciation on Equipment (each year)  | 30,000 |
| Extraordinary Loss (year 2022)  | 130,000 |
| Salary Expense (each year)  | 170,000 |

C. The normal rate of return on net assets for the industry is 15%.

**Required:**

A. Assume that Hopkins feels that it must earn a 20% return on its investment, and that goodwill is determined by capitalizing excess earnings. Based on these assumptions, calculate a reasonable offering price for Richfield, Inc. Indicate how much of the price consists of goodwill.

B. Assume that Hopkins feels that it must earn a 15% return on its investment, but that average excess earnings are to be capitalized for five years only. Based on these assumptions, calculate a reasonable offering price for Richfield, Inc. Indicate how much of the price consists of goodwill.

**Answer:**

A. Normal earnings for similar firms = ($6,000,000 - $3,700,000) × 15% = $345,000

|  |  |  |  |
| --- | --- | --- | --- |
| Expected earnings of target: |  |  |  |
| Pretax income of Richfield, Inc., 2020 | $470,000 |  |  |
| Subtract: Additional depreciation on buildings ($380,000 × .25) | (95,000) |  |  |
| Target's adjusted earnings, 2020 |  | 375,000 |  |
|  |  |  |  |
| Pretax income of Richfield, Inc., 2021 | $570,000 |  |  |
| Subtract: Additional depreciation on buildings | (95,000) |  |  |
| Target's adjusted earnings, 2021 |  | 475,000 |  |
|  |  |  |  |
| Pretax income of Richfield, Inc., 2022 | $370,000 |  |  |
| Add: Extraordinary loss  | 130,000 |  |  |
| Subtract: Additional depreciation on buildings | (95,000) |  |  |
| Target's adjusted earnings, 2022 |  | 405,000 |  |
|  |  |  |  |
| Target's three year total adjusted earnings |  |  | 1,255,000 |
| Target's three year average adjusted earnings |  |  | 418,333 |

Excess earnings of target = $418,333 – $345,000 = $73,333 per year

 $73,333

Present value of excess earnings (perpetuity) at 20%: 20% = $366,665 (Estimated Goodwill)

Implied offering price = Fair value of assets - Fair value of liabilities + Estimated goodwill

Implied offering price = $6,000,000 - $3,700,000 + $366,665 = 2,666,665.

B. Excess earnings of target (same as in A): $73,333

Present value of excess earnings (ordinary annuity) for five years at 15%; $73,333 × 3.35216 = $245,824

Implied offering price = $6,000,000 - $3,700,000 + $245,824 = $2,545,824.

Note: The salary expense and depreciation on equipment are expected to continue at the same rate, and thus do not necessitate adjustments.

**Problem 5. Park Company** acquired an 80% interest in the common stock of Southdale Company for $1,540,000 on July 1, 2022. Southdale Company's stockholders' equity on that date consisted of:

Common stock $800,000

Other contributed capital 400,000

Retained earnings 330,000

**Required:**

Compute the total noncontrolling interest to be reported in the consolidated balance sheet assuming the:

 (1) parent company concept.

 (2) economic unit concept.

**Answer:**

1.

|  |  |
| --- | --- |
| Total book value of Southdale's net assets ($800,000 + $400,000 + $330,000)  | $1,530,000 |
| Noncontrolling interest % | × .2 |
| Noncontrolling interest in net assets | $306,000 |

2.

|  |  |
| --- | --- |
| Total fair value of Southdale's net assets  ($1,540,000/.8) | $1,925,000 |
| Noncontrolling interest % | × .2 |
| Noncontrolling interest in net assets | $385,000 |

**Problem 6. The following** balances were taken from the records of S Company:

|  |  |  |
| --- | --- | --- |
| Common stock (1/1/20 and 12/31/20) |  | $720,000 |
| Retained earnings 1/1/20 | $160,000 |  |
| Net income for 2023 | 180,000 |  |
| Dividends declared in 2023 | (40,000) |  |
| Retained earnings, 12/31/20 |  | 300,000 |
| Total stockholders' equity on 12/31/20 |  | $1,020,000 |

P Company purchased 75% of S Company's common stock on January 1, 2021 for $900,000. The difference between implied value and book value is attributable to assets with a remaining useful life on January 1, 2023 of ten years.

**Required:**

A. Compute the difference between cost/(implied) and book value applying:

1. Parent company theory.

2. Economic unit theory.

B. Assuming the economic unit theory:

1. Compute noncontrolling interest in consolidated income for 2023.

2. Compute noncontrolling interest in net assets on December 31, 2023.

**Answer:**

|  |  |
| --- | --- |
| A1. Cost of investment | $900,000 |
|  Equity acquired .75($720,000 + $160,000) |  660,000 |
|  Difference (parent company theory) | $240,000 |
|  |  |
| 2. Implied value of S Company ($900,000/.75) | $1,200,000 |
|  Book value of S Company ($720,000 + $160,000) |  880,000 |
|  Difference (economic unit theory) | $320,000 |
|  |  |
| B1. Noncontrolling interest in consolidated income: |  |
|  .25[$180,000 - ($320,000/10)] | $37,000 |
|  |  |
| 2. Noncontrolling interest in net assets: |  |
|  .25[$1,020,000 + (9/10 × $320,000)] | $327,000 |

**Problem 7. Condensed balance** sheets for Phillips Company and Solina Company on January 1, 2018, are as follows:

Phillips Solina

Current assets $180,000 $ 85,000

Plant and equipment (net) 450,000  140,000

Total assets   $630,000  $225,000

Total liabilities $ 95,000 $ 35,000

Common stock, $10 par value  350,000  160,000

Other contributed capital  125,000   53,000

Retained earnings (deficit)   60,000  (23,000)

Total liabilities and equities  $630,000  $225,000

On January 1, 2018, the stockholders of Phillips and Solina agreed to a consolidation. Because FASB requires that one party be recognized as the acquirer and the other as the acquiree, it was agreed that Phillips was acquiring Solina. Phillips agreed to issue 20,000 shares of its $10 par stock to acquire all the net assets of Solina at a time when the fair value of Phillips' common stock was $15 per share.

On the date of consolidation, the fair values of Solina's current assets and liabilities were equal to their book values. The fair value of plant and equipment was, however, $150,000. Phillips will incur $20,000 of direct acquisition costs and $6,000 in stock issue costs.

**Required:**

**Prepare the journal entries** on the books of Phillips to record the acquisition of Solina Company's net assets.

**Answer**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Current Assets  | 85,000 |  |
|  | Plant and Equipment  | 150,000 |  |
|  | Goodwill\* | 100,000 |  |
|  |  Liabilities  |  | 35,000 |
|  |  Common Stock [(20,000 shares @ $10/share)] |  | 200,000 |
|  |  Other Contributed Capital [(20,000($15 – $10))] |  | 100,000 |
|  |   |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | Acquisition Costs Expense | 20,000 |  |
|  |  Cash |  | 20,000 |
|  |  |  |  |
|  | Other Contributed Capital | 6,000 |  |
|  |  Cash |  | 6,000 |

To record the direct acquisition costs and stock issue costs

\* Goodwill = Excess of Consideration of $335,000 (stock valued at $300,000 plus debt assumed of $35,000) over Fair Value of Identifiable Assets of $235,000 (total assets of $225,000 plus PPE fair value adjustment of $10,000)

**Problem 8. Stockholders** of Acme Company, Baltic Company, and Colt Company are considering alternative arrangements for a business combination. Balance sheets and the fair values of each company's assets on October 1, 2019, were as follows:

Acme Baltic Colt

Assets    $3,900,000  $7,500,000 $ 950,000

Liabilities $2,030,000 $2,200,000 $ 260,000

Common stock, $20 par value 2,000,000 1,800,000 540,000

Other contributed capital —0— 600,000 190,000

Retained earnings (deficit)  (130,000) 2,900,000  (40,000)

Total equities    $3,900,000 $7,500,000   $ 950,000

Fair values of assets  $4,200,000 $9,000,000  $1,300,000

Acme Company shares have a fair value of $50. A fair (market) price is not available for shares of the other companies because they are closely held. Fair values of liabilities equal book values.

**Required:**

Prepare a balance sheet for the business combination. Assume the following: Acme Company acquires all the assets and assumes all the liabilities of Baltic and Colt Companies by issuing in exchange 140,000 shares of its common stock to Baltic Company and 40,000 shares of its common stock to Colt Company.

Assume, further, that the acquisition was consummated on October 1, 2019, as described above. However, by the end of 2020, Acme was concerned that the fair values of one or both of the acquired units had deteriorated. To test for impairment, Acme decided to measure goodwill impairment using the present value of future cash flows to estimate the fair value of the reporting units (Baltic and Colt). Acme accumulated the following data:

|  |  |  |  |
| --- | --- | --- | --- |
| Year 2015 | Present Value of Future Cash Flows | Carrying Value of Identifiable Net Assets\* |  Fair Value Identifiable Net Assets |
|   |   |   |   |
| Baltic | $6,500,000  | $6,340,000  | $6,350,000  |
| Colt | $1,900,000  | 1,200,000 |  1,000,000 |
| \*Identifiable Net Assets do not include goodwill. |   |   |   |

Prepare the journal entry, if needed, to record goodwill impairment at December 31, 2020. Use FASB's simplified approach to test for goodwill impairment (assume that the qualitative test is satisfied or bypassed).

**Answer**

Acme Company

 Balance Sheet

 October 1, 2024

 (000)

**Part A.**

Assets (except goodwill) ($3,900 + $9,000 + $1,300) $14,200

Goodwill (1) 1,160

 Total Assets $15,360

Liabilities ($2,030 + $2,200 + $260) $4,490

Common Stock (180$20) + $2,000 5,600

Other Contributed Capital (180($50 – $20)) 5,400

Retained Earnings (130)

 Total Liabilities and Equity $15,360

(1) Cost (180$50) $9,000

 Fair value of net assets acquired:

 Fair value of assets of Baltic and Colt $10,300

 Less liabilities assumed 2,460 7,840

 Goodwill $1,160

**Part B. (using the new simplified goodwill impairment rules)**

**Baltic**

2025: **Step1**: Fair value of the reporting unit $6,500,000

 Carrying value of unit:

 Carrying value of identifiable net assets 6,340,000

 Carrying value of goodwill 200,000\*

 Total carrying value 6,540,000

Excess of carrying value over fair value 40,000

\*[(140,000 x $50) – ($9,000,000 – $2,200,000)]

The excess of carrying value over fair value means goodwill is impaired. The amount of goodwill impairment is the lower of:

Recorded value of goodwill 200,000

Excess of carrying value over fair value $ 40,000

For 2025, Baltic would impair goodwill of $40,000

**Colt**

2025: **Step1**: Fair value of the reporting unit $1,900,000

Carrying value of unit:

 Carrying value of identifiable net assets $1,200,000

 Carrying value of goodwill 960,000\*

 Total carrying value 2,160,000

Excess of carrying value over fair value 260,000

\*[(40,000 x $50) – ($1,300,000 – $260,000)]

The excess of carrying value over fair value means goodwill is impaired. The amount of goodwill impairment is the lower of:

Recorded value of goodwill 960,000

Excess of carrying value over fair value 260,000

For 2025, Colt would impair goodwill of $260,000

Total impairment loss is $300,000.

Journal entry:

Impairment Loss $300,000

Goodwill $300,000

**Problem 9.** On January 1, 2019, Perez Company acquired all the assets and assumed all the liabilities of Stalton Company and merged Stalton into Perez. In exchange for the net assets of Stalton, Perez gave its bonds payable with a maturity value of $600,000, a stated interest rate of 10%, interest payable semiannually on June 30 and December 31, a maturity date of January 1, 2029, and a yield rate of 12%. Balance sheets for Perez and Stalton (as well as fair value data) on January 1, 2019, were as follows:

|  |  |  |
| --- | --- | --- |
|  | Perez | Stalton |
|  |  Book Value |  Book Value | Fair Value |
| Cash | $ 250,000  | $114,000  | $114,000  |
| Receivables | 352,700  | 150,000  | 135,000 |
| Inventories | 848,300  | 232,000  | 310,000 |
| Land | 700,000  | 100,000  | 315,000 |
| Buildings | 950,000  | 410,000  | 54,900 |
| Accumulated depreciation—buildings |  (325,000) |  $ (170,500) |  |
| Equipment | 262,750  | 136,450  | 39,450 |
| Accumulated depreciation—equipment |    (70,050) |   (90,450) |        |
|  Total assets |  $2,968,700 |  $881,500 |  $968,350 |
|  |  |  |  |
| Current liabilities | $ 292,700  | $ 95,300  | $95,300  |
| Bonds payable, 8% due 1/1/2024, Interest payable 6/30 and 12/31 |  | 300,000  | 260,000 |
| Common stock, $15 par value | 1,200,000  |  |  |
| Common stock, $5 par value |  | 236,500  |  |
| Other contributed capital | 950,000  | 170,000  |  |
| Retained earnings |   526,000 |   79,700 |   |
|  Total equities | $2,968,700  |  $881,500  |   |

**Required:**

**Prepare the journal entry** on the books of Perez Company to record the acquisition of Stalton Company's assets and liabilities in exchange for the bonds.

**Answer:**

Present value of maturity value, 20 periods @ 6%: 0.3118$600,000 = $187,080

Present value of interest annuity, 20 periods @ 6%: 11.46992$30,000 = 344,098

Total Present value 531,178

Par value 600,000

Discount on bonds payable $68,822

|  |  |  |
| --- | --- | --- |
| Cash | 114,000 |  |
| Accounts Receivable | 135,000 |  |
| Inventory | 310,000 |  |
| Land  | 315,000 |  |
| Buildings  | 54,900 |  |
| Equipment  | 39,450 |  |
| Bond Discount ($40,000 + $68,822) | 108,822 |  |
|  Current Liabilities |  | 95,300 |
|  Bonds Payable ($300,000 + $600,000) |  | 900,000 |
|  Gain on Purchase of Business |  | 81,872 |

Computation of Excess of Net Assets Received Over Cost

Cost (Purchase Price) ($531,178 plus liabilities assumed of $95,300 and $260,000) $886,478

Less: Total fair value of assets received $968,350

Excess of fair value of net assets over cost $ 81,872)

**Problem 10. Pham Company** acquired the assets (except for cash) and assumed the liabilities of Senn Company on January 1, 2019, paying $720,000 cash. Senn Company's December 31, 2018, balance sheet, reflecting both book values and fair values, showed:

|  |  |  |
| --- | --- | --- |
|  | Book Value | Fair Value |
| Accounts receivable (net) | $ 72,000 | $  65,000 |
| Inventory | 86,000 | 99,000 |
| Land | 110,000 | 162,000 |
| Buildings (net) | 369,000 | 450,000 |
| Equipment (net) |  237,000 |   288,000 |
|  Total |  $874,000 |  $1,064,000 |
| Accounts payable | $ 83,000 | $  83,000 |
| Note payable | 180,000 | 180,000 |
| Common stock, $2 par value | 153,000 |  |
| Other contributed capital | 229,000 |  |
| Retained earnings |  229,000 |  |
|  Total |  $874,000 |  |

As part of the negotiations, Pham Company agreed to pay the former stockholders of Senn Company $200,000 cash if the postcombination earnings of the combined company (Pham) reached certain levels during 2019 and 2020. The fair value of contingent consideration was estimated to be $100,000 on the date of acquisition.

**Required:**

Record the journal entry on the books of Pham Company to record the acquisition on January 1, 2019.

During 2019, the likelihood of meeting the post combination earnings goal increased. As a result, at the end of 2019, the estimated fair value of the contingent consideration increased to $120,000. Prepare any journal entry needed to account for the change in the fair value of contingent consideration.

During 2020, the likelihood of meeting the post combination earnings goal significantly decreased and the contingent consideration target was not met. Prepare any journal entry needed to account for the change in the fair value of contingent consideration.

**Answer**

**Part A** January 1, 2024

|  |  |  |
| --- | --- | --- |
| Accounts Receivable | 72,000 |  |
| Inventory | 99,000 |  |
| Land  | 162,000 |  |
| Buildings  | 450,000 |  |
| Equipment  | 288,000 |  |
| Goodwill\* | 19,000 |  |
|  Allowance for Uncollectible Accounts |  | 7,000 |
|  Accounts Payable |  | 83,000 |
|  Note Payable |  | 180,000 |
|  Cash |  | 720,000 |
|  Liability for Contingent Consideration |  | 100,000 |

 \*Computation of Goodwill

 Consideration paid ($720,000 + $100,000) $820,000

 Total fair value of net assets acquired ($1,064,000 - $263,000) 801,000

 Goodwill $ 19,000

**Part B** January 2, 2024

|  |  |  |
| --- | --- | --- |
| Loss on Change in Fair Value of Contingent Consideration | 20,000 |  |
|  Liability for Contingent Consideration |  | 20,000 |

**Part C** January 2, 2025

|  |  |  |
| --- | --- | --- |
| Liability for Contingent Consideration | 120,000 |  |
|  Gain from Change in Fair Value of Contingent Consideration |  | 120,000 |

**Problem 11. Maplewood Corporation** purchased the net assets of West Corporation on January 2, 2020 for $560,000 and also paid $20,000 in direct acquisition costs. West’s balance sheet on January 1, 2020 was as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| Accounts receivable-net | $ 180,000 |  Current liabilities | $ 70,000 |
| Inventory | 360,000 |  Long term debt | 160,000 |
| Land | 40,000 |  Common stock ($1 par) | 20,000 |
| Building-net | 60,000 |  Paid-in capital | 430,000 |
| Equipment-net  | 80,000 |  Retained earnings | 40,000 |
| Total assets | $720,000 |  Total liab. & equity | $ 720,000 |

Fair values agree with book values except for inventory, land, and equipment, which have fair values of $400,000, $50,000 and $70,000, respectively. West has patent rights valued at $20,000.

**Required:**

A. Prepare Maplewood’s general journal entry for the cash purchase of West’s net assets.

B. Assume Maplewood Corporation purchased the net assets of West Corporation for $500,000 rather than $560,000, prepare the general journal entry.

**Answer:**

|  |  |  |  |
| --- | --- | --- | --- |
| Accounts Receivable |  | 180,000 |  |
| Inventory |  | 400,000 |  |
| Land |  | 50,000 |  |
| Building |  | 60,000 |  |
| Equipment |  | 70,000 |  |
| Patent |  | 20,000 |  |
| Goodwill |  | 10,000 |  |
| Acquisition | Expense |  | 20,000 |
|  | Current Liabilities |  | 70,000 |
|  | Long-term Debt |  | 160,000 |
|  | Cash |  | 580,000 |
| B. |  |  |  |
| Acquisition Expense |  | 20,000 |  |
| Accounts Receivable |  | 180,000 |  |
| Inventory |  | 400,000 |  |
| Land |  | 50,000 |  |
| Building |  | 60,000 |  |
| Equipment |  | 70,000 |  |
| Patent |  | 20,000 |  |
|  | Current Liabilities |  | 70,000 |
|  | Long-term Debt |  | 160,000 |
|  | Cash |  | 520,000 |
|  | Gain on Acquisition  |  | 50,000 |