Module 9 – Financial Accounting for MBAs, 7th Edition by Easton, Wild, Halsey & McAnally

Practice Quiz Solutions

1. Assume Berkshire Hathaway reports the following footnote with its 10-K report ($ millions).

   Data with respect to investments in equity securities are shown below. Amounts are in millions.

December 31, 2016	Cost	Unrealized Gains/losses	Fair Value
American Express Company	$ 1,287	$ 6,515	$ 7,802
The Coca-Cola Company	1,299	6,763	8,062
The Procter & Gamble Company	5,963	(175)	5,786
Wells Fargo & Company	2,754	3,221	5,975
Other	10,036	9,058	19,094
	$21,339	$25,382	$46,721

   At what amount does Berkshire Hathaway report its equity securities investment portfolio on its balance sheet?

   a. $46,896 million
   b. $21,339 million
   c. $46,721 million
   d. $21,164 million

   Answer: c

   Berkshire Hathaway's 2016 balance sheet reports the equity securities investment portfolio at the current market value of $46,721 million.

2. Assume DuPont's 2016 10-K report includes information relating to the company's equity method investments ($ millions). The following footnote reports summary balance sheets for affiliated companies for which DuPont uses the equity method of accounting. The information below is shown on a 100 percent basis followed by the carrying value of DuPont's investment in these affiliates.

Financial Position at December 31 (in millions)	**2016**	**2015**
Current assets	$1,292	$1,972
Noncurrent assets	1,780	2,811
Total assets	$3,072	$4,783
Short-term borrowings	$606	$734
Other current liabilities	621	932
Long-term borrowings	259	716
Other long-term liabilities	111	05
Total liabilities	$1,597	$2,687
DuPont's investments in affiliates (includes advances of $55 and $84, respectively)	$ 844	$1,034

What is the total stockholders' equity of the affiliates at the end of 2016?

a. $1,475
b. $844
c. $631
d. $3,072

Answer: a

The equity of the affiliated companies is $1,475 million (assets of $3,072 – liabilities of $1,597 = $1,475). DuPont's investment balance of $844 million includes advances to the affiliates of $55 million. The investment balance, net of these advances, is, therefore, $789 million. This is 53.5%, on average, of the $1,475 million net equity of the investee companies. This suggests that DuPont paid more than book value for the investments. DuPont does not control these investments (or they would be consolidated) and thus, must own less than 50% of the voting common shares.

3. Kling Company began operations in 2016 and, by year-end (December 31), had made six stock investments. Year-end information on these stock investments follows.

December 31, 2016	Cost or Equity Basis (as appropriate)	Year-End Market Value	Market Classification
Barth, Inc. ………………..	$32,000	$27,000	Trading
Foster, Inc. ……………….	175,500	168,000	Trading
McNichols, Inc.…………….	179,000	177,000	Available-for-sale
Patell, Inc. ……………....	152,000	148,000	Available-for-sale
Ertimur, Inc. ……………..	50,000	43,000	Equity method
Soliman, Inc. …………….	86,000	80,000	Equity method

What total amount of unrealized holding gains or unrealized holding losses related to stock investments appear in Kling's 2016 income statement?

a. $ 6,000 losses
b. $13,000 losses
c. $18,500 losses
d. $12,500 losses

Answer: d

Unrealized holding losses of $12,500 will appear in the 2016 income statement. These losses relate to the trading securities; specifically — Barth: $32,000 - $27,000 = $5,000, and Foster: $175,500 – $168,000 = $7,500; for a total of $5,000 + $7,500 = $12,500 in unrealized losses reported in income.

4. On January 1, 2017, Hatlen Company purchases 100% of Wolf Company for $19.2 million. At the time of acquisition, the fair market value of Wolf's tangible net assets (excluding goodwill) is $17.6 million. Hatlen ascribes the excess of $1.6 million to goodwill. Assume that the market value of Wolf declines to $16.0 million and that the fair market value of Wolf's tangible net assets is estimated at $14.7 million as of December 31, 2017.

Determine if the goodwill has become impaired and, if so, the amount of the impairment.

a. $300,000 impairment
b. No impairment
c. $1.3 million impairment
d. $2.9 million impairment

Answer: a

The investment is initially recorded on Hatlen's balance sheet at the purchase price of $19.2 million, including $1.6 million of goodwill. Since the market value of Wolf is less than the carrying amount of the investment on Hatlen's balance sheet, the goodwill might be impaired. To determine impairment, the imputed value of the goodwill is determined to be $16.0 million – $14.7 million = $1.3 million. Since this is less than the carrying amount, the goodwill is impaired by $300,000.

5. Amgen, Inc., reports the following footnote to its 10-K report.

Immunex acquisition. On July 15, 2002, the Company acquired all of the outstanding common stock of Immunex in a transaction accounted for as a business combination. Immunex was a leading biotechnology company dedicated to developing immune system science to protect human health. The acquisition enhanced Amgen's strategic position within the biotechnology industry by strengthening and diversifying its (1) product base and product pipeline in key therapeutic areas, and (2) discovery research capabilities in proteins and antibodies. The purchase price was allocated to the tangible and identifiable intangible assets acquired and liabilities assumed based on their estimated fair values at the acquisition date. The following table summarizes the estimated fair values of the assets acquired and liabilities assumed as of the acquisition date (in millions):

Current assets, principally cash and marketable securities	$ 1,619.1
Deferred tax assets	200.2
Property, plant, and equipment	571.6
In-process research and development	2,991.8
Identifiable intangible assets, principally developed product technology and core technology	4,803.2
Goodwill	9,774.2
Other assets	26.2
Current liabilities	(579.0)
Deferred tax liabilities	(1,635.5)
Net assets	$17,771.8

The allocation of the purchase price was based, in part, on a third-party valuation of the fair values of in-process research and development, identifiable intangible assets, and certain property, plant, and equipment. The estimated fair value of the in-process R&D projects was determined based on the use of a discounted cash flow model. For each project, the estimated after-tax cash flows were probability weighted to take into account the stage of completion and the risks surrounding the successful development and commercialization. These cash flows were then discounted to a present value using discount rates ranging from 12% to 14%.

Of the total assets acquired, what portion is allocated to tangible assets and what portion to intangible assets?

a. 68.6% tangible 31.4% intangible
b. 27.2% tangible 72.8% intangible
c. 12.1% tangible 87.9% intangible
d. 61.2% tangible 38.8% intangible

Answer: c

($ millions)		
Current assets, principally cash and marketable securities	$ 1,619.1	
Deferred tax assets	200.2	
Property, plant, and equipment	571.6	
Other assets	26.2	
Total tangible assets	$ 2,417.1	12.1%
In-process research and development	$ 2,991.8	
Identifiable intangible assets, principally developed product technology and core technology	4,803.2	
Goodwill	9,774.2	
Total intangible assets	$17,569.2	87.9%

6. Assume the following is a portion of the investments footnote from MetLife's 2016 10-K report. Investment earnings are a crucial component of the financial performance of insurance companies such as MetLife, and investments comprise a large part of Metlife's assets. MetLife accounts for its bond investments as available-for-sale securities.

		Gross Unrealized		
December 31, 2016 (in millions)	**Cost or Amortized Cost**	**Gain**	**Loss**	**Estimated Fair Value**
U.S. corporate securities	$ 72,339	$2,814	$ 835	$ 74,318
Residential mortgaged-backed securities	47,365	353	472	47,246
Foreign corporate securities	33,578	1,842	439	34,981
U.S. treasury/agency securities	25,643	1,401	86	26,958
Commercial mortgaged-backed securities	17,682	223	207	17,698
Asset-backed securities	11,533	91	51	11,573
Foreign government securities	10,080	1,401	35	11,446
State and political subdivision securities	4,601	185	36	4,750
Other fixed maturity securities	912	17	41	888
Total bonds	223,733	8,327	2,202	229,858
Redeemed preferred stocks	193	2	3	192
Total fixed maturities	$223,926	$8,329	$2,205	$230,050

At what amount does MetLife report its bond investments on its balance sheets for 2016 and what are the net unrealized gains (losses) for 2016?

a. $223,926 million, $8,329 million gain
b. $230,050 million, $6,124 million gain
c. $223,926 million, $6,124 million gain
d. $230,050 million, $2,205 million loss

Answer: b

Available-for-sale investments are reported at fair value on the balance sheet. Thus, MetLife's bond investments are reported at $230,050 million as of 2016.

Net unrealized gains for 2016 are $6,124 million ($8,329 million – $2,205 million).

7. Caterpillar Inc. consists of two business units: the manufacturing company (parent corporation) and a wholly owned finance subsidiary. These two units are consolidated in Caterpillar's 10-K report.

Assume the following is a supplemental disclosure that Caterpillar includes in its 10-K report that shows the separate balance sheets of the parent and its subsidiary, as well as consolidating adjustments and the consolidated balance sheet presented to shareholders. This supplemental disclosure is not mandated under GAAP, but is voluntarily reported by Caterpillar as useful information for investors and creditors.

	Supplemental Consolidating Data			
December 31, 2016 (Millions of Dollars)	**Consolidated**	**Machinery and Engines**	**Financial Products**	**Consolidating Adjustments**
Cash and short-term investments	$ 1,108	$ 951	$ 157	$ —
Receivables-trade and other	7,526	2,833	419	4,274
Receivables-finance	6,442	—	11,058	(4,616)
Deferred and refundable income taxes	344	276	68	—
Prepaid expenses	2,146	2,139	26	(19)
Inventories	5,224	5,224	—	—
Total current assets	22,790	11,423	11,728	(361)
Property, plant and equipment-net	7,988	5,067	2,921	—
Long-term receivables-trade and other	1,037	301	36	700
Long-term receivables-finance	10,301	—	11,036	(735)
Investments in unconsolidated affiliated companies	565	526	39	—
Investments in Financial Products subsidiaries	—	3,253	—	(3,253)
Deferred income taxes	768	1,057	32	(321)
Intangible assets	424	418	6	—
Goodwill	1,451	1,451	—	—
Other assets	1,745	491	1,254	—
Total assets	$47,069	$23,987	$27,052	$(3,970)
Liabilities				
Short-term borrowings	$ 5,569	$ 871	$ 4,897	$ (199)
Accounts payable	3,471	3,347	261	(137)
Accrued expenses	2,617	1,605	1,038	(26)
Accrued wages, salaries and employee benefits	1,845	1,826	19	—
Customer Advances	395	395	—	—
Dividends payable	168	168	—	—
Deferred and current income taxes payable	528	448	84	(4)
Long-term debt due within one year	4,499	340	4,159	—
Total current liabilities	19,092	9,000	10,458	(366)
Long-term debt due after one year	15,677	2,752	12,960	35
Liability for postemployment benefits	2,991	2,991	—	—
Deferred income taxes and other liabilities	877	812	381	(316)
Total liabilities.	38,637	15,555	23,799	(717)
Stockholders' equity				
Common stock	1,859	1,859	875	(875)
Treasury stock	(4,637)	(4,637)	—	—
Profit employed in the business	11,808	11,808	2,197	(2,197)
Accumulated other comprehensive income	(598)	(598)	181	(181)
Total stockholders' equity	8,432	8,432	3,253	(3,253)
Total liabilities and stockholders' equity	$47,069	$23,987	$27,052	$(3,970)

Using this disclosure, what is the balance of Investments in Financial Products Subsidiaries as of December 31, 2016, on the parent's balance sheet?

a. $3,253 million
b. $526 million
c. $565 million
d. $39 million

Answer: a

The Investment in Financial Products Subsidiaries is reported on the parent's (Machinery and Engine's) balance sheet at $3,253 million. This is the same balance as reported for stockholders' equity of the Financial Products subsidiary. This relation will always exist so long as the investment is originally purchased at book value.

8. Assume the following year-end footnote disclosure was obtained from Pfizer's 10-K.

(Millions of Dollars)	2016
Cost of available-for-sale equity securities……………	$270
Gross unrealized gains…………………………………	189
Gross unrealized losses………………………………..	(12)
Fair value of available-for-sale equity securities………	$447

What amount does Pfizer report on its 2016 balance sheet as available-for-sale equity securities?

a. $270 million
b. $447 million
c. $459 million
d. $258 million

Answer: b

Pfizer reports available-for-sale securities at their market value on the balance sheet. For 2016, this is equal to the original cost ($270 million) plus unrecognized gains ($189 million) and less unrealized losses ($12 million), or $447 million.

9. Square Company purchases an equity investment in Tangle Company at a purchase price of $8 million, representing 40% of the book value of Tangle. During the current year, Tangle reports net income of $700,000 and pays cash dividends of $300,000. At the end of the year, the market value of Square's investment is $8.3 million.

What amount of income does Square report relating to this investment in Tangle for the year?

a. $240,000
b. $120,000
c. $280,000
d. $300,000

Answer: c

Equity income on this investment is computed as Tangle's earnings multiplied by the 40% percent that Square owns. In this case, equity earnings equal:

$$\$700{,}000 \times 40\% = \underline{\underline{\$280{,}000}}$$

Note that dividends are treated as a return of investment. Square reduces the investment balance by $120,000, computed as $300,000 × 40%. Dividends are not income to Square. Also, Square records the investment at adjusted cost, not at market value, and unrealized gains (losses) are neither recognized on the balance sheet nor in the income statement.

10. Assume that Reed Company purchases 18,000 common shares of Aiello Company for $8 cash per share. During the year, Reed receives a cash dividend of $0.90 per common share from Aiello, and the year-end market price of Aiello common stock is $9 per share. Reed Company classified the investment as trading securities.

How much income does Reed report relating to this investment for the year?

a. $ 18,000
b. $144,000
c. $145,800
d. $ 34,200

Answer: d

Reed will report $34,200 as income: $16,200 of dividend income (18,000 x $0.90) plus $18,000 of unrealized gain income relating to the increase in the stock's market price [($9 –$8) x 18,000 shares].