

FA Module 17 goodwill methods practice exam questions

The table below shows book values and fair values at December 31, 20XX, for the assets and liabilities of ABC and XYZ.

	ABC		XYZ	
	Book Value	Fair Value	Book Value	Fair Value
Cash & Marketable Securities	84	84	21	21
Accounts Receivable	42	42	6	6
Inventory	96	32	26	32
Property, Plant, Equipment (Net)	608	996	152	251
Accounts Payable	157	157	39	39
Long-term Debt	484	444	122	114
Capital Stock	105		23	

Capital stock is the par value plus the additional paid-in capital. The retained earnings is the entry so that the book value of assets equals the book value of liabilities plus equity.

On December 31, 20XX, ABC issues a zero coupon bond for 40, issues new common stock for 40, and pays 120 to acquire 60% of the stock of XYZ at its market price. The zero coupon bond matures in 7 years for 60.

The practice exam questions below refer to ABC's consolidated balance sheet at December 31, 20XX.

Question 17.2: Net cash paid

What is the net cash paid by ABC on December 31, 20XX, to acquire its interest in XYZ?

Answer 17.2: ABC pays cash of 120 to the owners of XYZ, and it receives cash of 40 for the zero coupon bond, and 40 for the new common stock. The net cash it pays out is  $120 - 40 - 40 = 40$ .

Question 17.3: Property, plant, and equipment

What is property, plant, and equipment on ABC's consolidated balance sheet at December 31, 20XX?

Answer 17.3:  $608 + 251 = 859$

(book value of parent's asset + fair value of subsidiary's asset)

Question 17.4: Inventory

What is inventory on ABC's consolidated balance sheet at December 31, 20XX?

Answer 17.4:  $96 + 32 = 128$

(book value of parent's asset + fair value of subsidiary's asset)

Question 17.5: Long-term debt

What is long-term debt on ABC's consolidated balance sheet at December 31, 20XX?

Answer 17.5:  $484 + 114 + 40 = 638$

(book value of parent's debt + fair value of subsidiary's debt + new debt issued)

Question 17.6: Common stock

What is common stock + additional paid-in capital on ABC's consolidated balance sheet at December 31, 20XX?

Answer 17.6:  $105 + 40 = 145$

(common stock of parent + additional common stock issued)

Question 17.7: Retained earnings

What are retained earnings on ABC's consolidated balance sheet at December 31, 20XX?

Answer 17.7:  $84 + 42 + 96 + 608 - 157 - 484 - 105 = 84$

(retained earnings on consolidated balance sheet = retained earnings of parent, which is the balancing item for book value of assets to equal book value of liabilities + shareholders' equity: cash + accounts receivable + inventory + property, plant, and equipment – accounts payable – long-term debt – common stock)

*Question:* What about the fair value of XYZ's balance sheet items?

*Answer:* On the purchase date, the net fair value of XYZ's balance sheet items is the goodwill asset and does not affect ABC's retained earnings.

Question 17.8: Identifiable net assets

What is the fair value of XYZ's identifiable net assets?

Answer 17.8:  $21 + 6 + 32 + 251 - 39 - 114 = 157$

(fair value of XYZ's cash + accounts receivable + inventory + property, plant, and equipment – accounts payable – long-term debt)

Question 17.9: Full goodwill

What is full goodwill on ABC's consolidated balance sheet at December 31, 20XX?

Answer 17.9:  $120 / 0.60 - 157 = 43$

(Purchase price / percent bought – fair value of identifiable net assets)

Purchase price / percent bought is the price that would have been paid for all of XYZ. Full goodwill is the excess of the purchase price for the entire subsidiary over the fair value of all its identifiable net assets.

Question 17.10: Non-controlling (minority) interest for full goodwill

What is non-controlling (minority) interest for full goodwill on ABC's consolidated balance sheet at December 31, 20XX?

Answer 17.10:  $120 \times (1 - 0.60) / 0.60 = 80$

(Purchase price  $\times$  (1 – percent bought) / percent bought)

Question 17.11: Partial goodwill

What is partial goodwill on ABC's consolidated balance sheet at December 31, 20XX?

Answer 17.11:  $120 - 0.60 \times 157 = 25.80$

(Purchase price – percent bought  $\times$  fair value of identifiable net assets)

Partial goodwill is the excess of the purchase price over the fair value of its identifiable net assets that have been acquired. Partial goodwill = full goodwill  $\times$  percent bought:  $43 \times 60\% = 25.80$

Question 17.12: Non-controlling (minority) interest for partial goodwill

What is non-controlling (minority) interest for partial goodwill on ABC's consolidated balance sheet at December 31, 20XX?

Answer 17.12:  $(1 - 0.60) \times 157 = 62.80$

( (1 – percent bought)  $\times$  fair value of identifiable net assets)

Note: the four goodwill values have a simple relation:

full goodwill – partial goodwill =  
non-controlling (minority) interest for full goodwill – non-controlling (minority) interest for partial goodwill.

$43 - 25.80 = 17.20 = 80 - 62.80 = 17.20$

full goodwill – non-controlling (minority) interest for full goodwill =  
partial goodwill – non-controlling (minority) interest for partial goodwill.

$43 - 80 = -37.00 = 25.80 - 62.80 = -37.00$