Financial Modeling – Certification Quiz Questions

Module 3 – More Advanced Accounting

1. A company issues a $100 Face Value bond with a 10% Original Issue Discount (OID), and it pays a 3% Issuance Fee to the lenders who arranged the deal. The bond has a 10% fixed coupon rate, split 50/50 between Cash Interest and Paid-in-Kind (PIK) Interest. It matures in 10 years.

   The company decides to repay this bond early, in Year 3. It makes no principal repayments before Year 3, and there are no penalty fees associated with this early repayment.

   Which of the following screenshots correctly illustrates the changes in the OID, Issuance Fees, Face Value, and Book Value, as well as the Interest Expense, in Years 1 – 3?

		Historical	Projected				
Debt Schedule and Assumptions:	*Units:*	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
OID Beginning Balance:	*$ M*		$ 10.0	$ 9.0	$ 8.0	$ -	$ -
(-) Amortization of OID:	*$ M*		(1.0)	(1.0)	(8.0)	-	-
(-) Loss on Unamortized OID:	*$ M*		-	-	-	-	-
OID Ending Balance:	*$ M*	**10.0**	**9.0**	**8.0**	**-**	**-**	**-**
Issuance Fee Beginning Balance:	*$ M*		3.0	2.7	2.4	-	-
(-) Amortization of Debt Issuance Fees:	*$ M*		(0.3)	(0.3)	(2.4)	-	-
(-) Loss on Debt Extinguishment:	*$ M*		-	-	-	-	-
Issuance Fee Ending Balance:	*$ M*	**3.0**	**2.7**	**2.4**	**-**	**-**	**-**
Beginning Face Value of Debt:	*$ M*		100.0	105.0	110.3	-	-
(+) Paid-in-Kind (PIK) Interest:	*$ M*		5.0	5.3	5.5	-	-
(-) Debt Principal Repayments & Maturities:	*$ M*		-	-	(115.8)	-	-
Ending Face Value of Debt:	*$ M*	**100.0**	**105.0**	**110.3**	**-**	**-**	**-**
Beginning Book Value of Debt:	*$ M*		87.0	93.3	99.9	-	-
(+) Paid-in-Kind (PIK) Interest:	*$ M*		5.0	5.3	5.5	-	-
(+) Amortization of Debt Issuance Fees:	*$ M*		0.3	0.3	2.4	-	-
(+) Amortization of OID:	*$ M*		1.0	1.0	8.0	-	-
(+) Loss on Debt Extinguishment:	*$ M*		-	-	-	-	-
(+) Loss on Unamortized OID on Repayment:	*$ M*		-	-	-	-	-
(-) Debt Principal Repayments:	*$ M*		-	-	(115.8)	-	-
Ending Book Value of Debt:	*$ M*	**87.0**	**93.3**	**99.9**	**-**	**-**	**-**
(+) Interest Expense:	*$ M*		10.0	10.5	11.0	-	-
(+) Amortization of OID (Non-Cash):	*$ M*		1.0	1.0	8.0	-	-
(+) Amortization of Debt Issuance Fees (Non-Cash):	*$ M*		0.3	0.3	2.4	-	-
Total Interest Expense on Income Statement:	*$ M*		**11.3**	**11.8**	**21.4**	**-**	**-**
Losses on Debt Extinguishment:	*$ M*	**-**	**-**	**-**	**-**	**-**	**-**

a.

Debt Schedule and Assumptions:	Units:	Historical Year 0	Projected Year 1	Year 2	Year 3	Year 4	Year 5
OID Beginning Balance:	$ M		$ 10.0	$ 9.5	$ 8.8	$ -	$ -
(-) Amortization of OID:	$ M		(1.0)	(1.1)	(1.1)	-	-
(-) Loss on Unamortized OID:	$ M		0.5	0.4	(7.7)	-	-
OID Ending Balance:	$ M	**10.0**	**9.5**	**8.8**	**-**	**-**	**-**
Issuance Fee Beginning Balance:	$ M		3.0	2.8	2.6	-	-
(-) Amortization of Debt Issuance Fees:	$ M		(0.3)	(0.3)	(0.3)	-	-
(-) Loss on Debt Extinguishment:	$ M		0.1	0.1	(2.3)	-	-
Issuance Fee Ending Balance:	$ M	**3.0**	**2.8**	**2.6**	**-**	**-**	**-**
Beginning Face Value of Debt:	$ M		100.0	105.0	110.3	-	-
(+) Paid-in-Kind (PIK) Interest:	$ M		5.0	5.3	5.5	-	-
(-) Debt Principal Repayments & Maturities:	$ M		-	-	(115.8)	-	-
Ending Face Value of Debt:	$ M	**100.0**	**105.0**	**110.3**	**-**	**-**	**-**
Beginning Book Value of Debt:	$ M		87.0	92.7	98.8	-	-
(+) Paid-in-Kind (PIK) Interest:	$ M		5.0	5.3	5.5	-	-
(+) Amortization of Debt Issuance Fees:	$ M		0.3	0.3	0.3	-	-
(+) Amortization of OID:	$ M		1.0	1.1	1.1	-	-
(+) Loss on Debt Extinguishment:	$ M		(0.1)	(0.1)	2.3	-	-
(+) Loss on Unamortized OID on Repayment:	$ M		(0.5)	(0.4)	7.7	-	-
(-) Debt Principal Repayments:	$ M		-	-	(115.8)	-	-
Ending Book Value of Debt:	$ M	**87.0**	**92.7**	**98.8**	**-**	**-**	**-**
(+) Interest Expense:	$ M		10.0	10.5	11.0	-	-
(+) Amortization of OID (Non-Cash):	$ M		1.0	1.1	1.1	-	-
(+) Amortization of Debt Issuance Fees (Non-Cash):	$ M		0.3	0.3	0.3	-	-
Total Interest Expense on Income Statement:	$ M		**11.3**	**11.9**	**12.5**	**-**	**-**
Losses on Debt Extinguishment:	$ M	**-**	**(0.6)**	**(0.5)**	**10.0**	**-**	**-**

b.

		Historical	Projected				
Debt Schedule and Assumptions:	*Units:*	**Year 0**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
OID Beginning Balance:	*$ M*		$ 10.0	$ 9.0	$ 8.0	$ -	$ -
(-) Amortization of OID:	*$ M*		(1.0)	(1.0)	(1.0)	-	-
(-) Loss on Unamortized OID:	*$ M*		-	-	(7.0)	-	-
OID Ending Balance:	*$ M*	**10.0**	**9.0**	**8.0**	**-**	**-**	**-**
Issuance Fee Beginning Balance:	*$ M*		3.0	2.7	2.4	-	-
(-) Amortization of Debt Issuance Fees:	*$ M*		(0.3)	(0.3)	(0.3)	-	-
(-) Loss on Debt Extinguishment:	*$ M*		-	-	(2.1)	-	-
Issuance Fee Ending Balance:	*$ M*	**3.0**	**2.7**	**2.4**	**-**	**-**	**-**
Beginning Face Value of Debt:	*$ M*		100.0	105.0	110.3	-	-
(+) Paid-in-Kind (PIK) Interest:	*$ M*		5.0	5.3	5.5	-	-
(-) Debt Principal Repayments & Maturities:	*$ M*		-	-	(115.8)	-	-
Ending Face Value of Debt:	*$ M*	**100.0**	**105.0**	**110.3**	**-**	**-**	**-**
Beginning Book Value of Debt:	*$ M*		87.0	93.3	99.9	-	-
(+) Paid-in-Kind (PIK) Interest:	*$ M*		5.0	5.3	5.5	-	-
(+) Amortization of Debt Issuance Fees:	*$ M*		0.3	0.3	0.3	-	-
(+) Amortization of OID:	*$ M*		1.0	1.0	1.0	-	-
(+) Loss on Debt Extinguishment:	*$ M*		-	-	2.1	-	-
(+) Loss on Unamortized OID on Repayment:	*$ M*		-	-	7.0	-	-
(-) Debt Principal Repayments:	*$ M*		-	-	(115.8)	-	-
Ending Book Value of Debt:	*$ M*	**87.0**	**93.3**	**99.9**	**-**	**-**	**-**
(+) Interest Expense:	*$ M*		5.0	5.3	5.5	-	-
(+) Amortization of OID (Non-Cash):	*$ M*		1.0	1.0	1.0	-	-
(+) Amortization of Debt Issuance Fees (Non-Cash):	*$ M*		0.3	0.3	0.3	-	-
Total Interest Expense on Income Statement:	*$ M*		**6.3**	**6.6**	**6.8**	**-**	**-**

c.

Losses on Debt Extinguishment:	*$ M*	**-**	**-**	**-**	**9.1**	**-**	**-**

Debt Schedule and Assumptions:	Units:	Historical Year 0	Projected Year 1	Year 2	Year 3	Year 4	Year 5
OID Beginning Balance:	$ M		$ 10.0	$ 9.0	$ 8.0	$ -	$ -
(-) Amortization of OID:	$ M		(1.0)	(1.0)	(1.0)	-	-
(-) Loss on Unamortized OID:	$ M		-	-	(7.0)	-	-
OID Ending Balance:	$ M	**10.0**	**9.0**	**8.0**	**-**	**-**	**-**
Issuance Fee Beginning Balance:	$ M		3.0	2.7	2.4	-	-
(-) Amortization of Debt Issuance Fees:	$ M		(0.3)	(0.3)	(0.3)	-	-
(-) Loss on Debt Extinguishment:	$ M		-	-	(2.1)	-	-
Issuance Fee Ending Balance:	$ M	**3.0**	**2.7**	**2.4**	**-**	**-**	**-**
Beginning Face Value of Debt:	$ M		100.0	105.0	110.3	-	-
(+) Paid-in-Kind (PIK) Interest:	$ M		5.0	5.3	5.5	-	-
(-) Debt Principal Repayments & Maturities:	$ M		-	-	(115.8)	-	-
Ending Face Value of Debt:	$ M	**100.0**	**105.0**	**110.3**	**-**	**-**	**-**
Beginning Book Value of Debt:	$ M		87.0	93.3	99.9	-	-
(+) Paid-in-Kind (PIK) Interest:	$ M		5.0	5.3	5.5	-	-
(+) Amortization of Debt Issuance Fees:	$ M		0.3	0.3	0.3	-	-
(+) Amortization of OID:	$ M		1.0	1.0	1.0	-	-
(+) Loss on Debt Extinguishment:	$ M		-	-	2.1	-	-
(+) Loss on Unamortized OID on Repayment:	$ M		-	-	7.0	-	-
(-) Debt Principal Repayments:	$ M		-	-	(115.8)	-	-
Ending Book Value of Debt:	$ M	**87.0**	**93.3**	**99.9**	**-**	**-**	**-**
(+) Interest Expense:	$ M		10.0	10.5	11.0	-	-
(+) Amortization of OID (Non-Cash):	$ M		1.0	1.0	1.0	-	-
(+) Amortization of Debt Issuance Fees (Non-Cash):	$ M		0.3	0.3	0.3	-	-
Total Interest Expense on Income Statement:	$ M		**11.3**	**11.8**	**12.3**	**-**	**-**
Losses on Debt Extinguishment:	$ M	**-**	**-**	**-**	**9.1**	**-**	**-**

d.

2. Consider the screenshot below, which shows an excerpt of a Parent Company's Balance Sheet and its Equity Investments in Years 1 – 3, with blank figures in Years 4 – 5:

Balance Sheet:	Year 1	Year 2	Year 3	Year 4	Year 5
ASSETS:					
Non-Current Assets:					
Net PP&E:	500	505	510	515	520
Operating Lease Assets:	200	220	240	260	280
Equity Investments:	-	30	68		

At the end of Year 3, Parent Co. owns 30% of Sub Co.

At the end of Year 4, it acquires an additional 10%, taking its stake to 40%, when Sub Co.'s Market Cap is $300. Then, at the end of Year 5, it sells half its stake, moving to 20% ownership in Sub Co., when Sub Co.'s Market Cap is $350.

Sub Co. earns Net Income of $20 in Years 4 and 5, and it issues $10 in Common Dividends in both years.

Based on this information, what are the CORRECT values for the Equity Investments in Years 4 and 5? Round to the nearest whole number.

a. Year 4 Equity Investments = $103; Year 5 Equity Investments = $55.

b. Year 4 Equity Investments = $101; Year 5 Equity Investments = $53.

c. Year 4 Equity Investments = $101; Year 5 Equity Investments = $70.

d. Year 4 Equity Investments = $101; Year 5 Equity Investments = $55.

3. Now, assume that Parent Co. owns 80% of Sub Co., so it consolidates Sub Co.'s financial statements 100% with its own, it creates Goodwill based on the Equity Purchase Price for 100% of Sub Co. minus Sub Co.'s Common Shareholders' Equity, and it creates a Noncontrolling Interest for the 20% of Sub Co. it does not own.

   Which of the following line items from the Cash Flow Statement will INCREASE this Noncontrolling Interest each year? Assume that Parent Co. and Sub Co. both have positive Net Income, with Common Dividends shown as negatives on the Cash Flow Statement.

   a. 20% * Sub Co.'s Net Income.

   b. 80% * Sub Co.'s Common Dividends.

   c. 100% * Sub Co.'s Common Dividends.

   d. 80% * Sub Co.'s Net Income.

   e. 20% * Sub Co.'s Common Dividends.

   f. Answer choices 1, 2, and 3.

g. Answer choices 1 and 2.

h. Answer choices 4 and 5.

i. Answer choices 3, 4, and 5.