Study Question Solutions for Quiz 2

Edits in red represent edits by Prof Crowley to book answers

(20-30 min.) P 5-68A

Journal

DATE	ACCOUNT TITLES AND EXPLANATION	DEBIT	CREDIT
2010			
Oct. 31	Note Receivable — **Buy Low Foods….**	34,000	
	Sales Revenue……		34,000
Dec. 31	Interest Receivable		
	($34,000 × .0525 × 2/12)……	297.5	
	Interest Revenue……		297.5
2011			
Jan. 31	**Cash……...**	34,446.25	
	Note Receivable — **Safeway……**		34,000
	Interest Receivable……		297.5
	Interest Revenue		
	($34,000 × .0525 × 1/12)…		148.75
Feb. 18	Note Receivable — **Duton Market ……**	7,600	
	Accounts Receivable —		
	Duton **Market……**		7,600
19	**Cash……...**	7,400	
	Financing Expense……	200	
	Note Receivable — Duton Market		7,600

Journal

DATE	ACCOUNT TITLES AND EXPLANATION	DEBIT	CREDIT
20X7			
Nov. 11	Note Receivable **— Street Provisions ….**	14,600	
	Cash……		14,600
Dec. 31	**Interest Receivable**……..	200	
	Interest Revenue ($14,600 × .10 × 50/365)		200

Req. 2

BALANCE SHEET	December 31, 20X7	20X6
Current assets:		
Note receivable……	$14,600	$34,000
Interest receivable……	200	297.5

(20-30 min.) P 5-77B

Req. 1

Journal

DATE	ACCOUNT TITLES AND EXPLANATION	DEBIT	CREDIT
2010			
Nov. 30	Note Receivable **— Bragg Market**.....	32,000	
	Service **Revenue**.....		32,000
Dec. 31	**Interest Receivable (€32,000 × .04 × 1/12).**	106.67	
	Interest Revenue.....		106.67
2011			
Feb. 28	**Cash**.....	32,320	
	Note Receivable **—** Bragg Market		32,000
	Interest **Receivable**.....		106.67
	Interest Revenue **(€32,000 × .04 × 2/12)**.....		213.33
Mar. 1	Note Receivable **— Don's Market**	7,200	
	Accounts Receivable **— Don's** Market		7,200
1	**Cash**.....	7,000	
	Financing Expense.....	200	
	Note Receivable **— Don's Market** ...		7,200

Journal

DATE	ACCOUNT TITLES AND EXPLANATION	DEBIT	CREDIT
2011			
Dec. 16	Note Receivable — Stratford Provisions	15,400	
	Cash.....		15,400
Dec. 31	**Interest Receivable**.....	60.12	
	Interest Revenue (€15,400 × .095 × 15/365)		60.12

Req. 2

	December 31	
BALANCE SHEET	20X7	20X6
Current assets:		
Note receivable.....	**€15,400**	**€32,000**
Interest receivable.....	60.12	106.67

(30-40 min.) P 6-63A

Req. 1 (partial income statements)

Bell Aviation
Income Statement
Year Ended December 31, 20X6

	AVERAGE	FIFO	LIFO
Sales revenue	$132,447	$132,447	$132,447
Cost of goods sold	73,888	73,359	74,360
Gross profit	$ 58,559	$ 59,088	$ 58,087

Computations of cost of goods sold:

$$\text{Average cost per unit} = \frac{(\$6{,}083 + \$2{,}496 + \$68{,}470 + \$4{,}876)}{(790 + 320 + 8{,}350 + 530)} = \$8.2007$$

COGS at average cost = 9,010 × $8.2007 = $73,888

FIFO COGS = (790 @ $7.70) + (320 @ $7.80) + (7,900 @ $8.20) = $73,359

LIFO COGS = (530 @ $9.20) + (8,350 @ $8.20) + (130 @ $7.80) = $74,360

Req. 2

Use the LIFO method to minimize income tax because cost of goods sold is highest (gross profit is lowest) under LIFO when inventory costs are rising.

(30-40 min.) P 6-72B

Req. 1 (partial income statements

Buzz Aviation
Income Statement
Year Ended December 31, 20X6

	AVERAGE	FIFO	LIFO
Sales revenue	€128,226	€128,226	€128,226
Cost of goods sold	73,171	72,654	73,607
Gross profit	€ 55,055	€ 55,572	€ 54,619

Computations of cost of goods sold:

$$\text{Average cost per case} = \frac{(€5{,}548 + €2{,}387 + €67{,}797 + €4{,}732)}{(730 + 310 + 8{,}370 + 520)} = €8.1031$$

COGS at average cost = 9,030 × $8.1031 = €73,171

FIFO COGS = (730 @ $7.60) + (310 @ $7.70) + (7,990 @ $8.10) = €72,654

LIFO COGS = (520 @ $9.10) + (8,370 @ $8.10) + (140 @ $7.70) = €73,607

Req. 2

Use LIFO to report the highest net income because cost of goods sold is lowest (gross profit is highest) under LIFO when inventory costs are rising.

(15-30 min.) P 6-64A

ELV Trade Mart should apply the *lower-of-cost-or-market* rule to account for inventories. The current replacement cost of ending **inventory is less than ELV's actual cost, so ELV must write the** inventory down to current replacement cost, with the following journal entry:

Inventory Write-down.....	75,000	
Inventory.....		75,000
To write inventory down to NRV.		

ELV should report the following amounts in its financial statements:

BALANCE SHEET	
Inventor**y**.....	$145,000*
INCOME STATEMENT	
Cost of goods sold ($770,000**)**.....	$770,000

***$200,000 − $75,000 = $145,000**

Reliability qualitative characteristic is the reason to account for inventory at the lower of cost or NRV. Not revaluing the inventory to the lower NRV lends biasness to the ending inventory which violates the reliability requirement.

The *Matching principle* (from Chapter 3: Accrual Accounting & Income) requires costs/losses to be recorded in the period in which they contributed to revenue/gains. Since the impairment in inventory occurred during this accounting period, not recording the impairment would mean a misstatement of both **this year's and the subsequent year's net income.**

Responses may vary.

(15-20 min.) P 6-73B

Aquarium Trade Mart should apply the *lower-of-cost-or-market* rule to account for inventories. The current replacement cost of **ending inventory is less than Aquarium Trade Mart's actual cost,** so Aquarium Trade Mart must write the inventory down to current replacement cost, with the following journal entry:

Inventory Write-down.....	70,000	
Inventory.....		70,000
To write inventory down to NRV.		

Aquarium Trade Mart should report the following in its financial statements:

BALANCE SHEET
Inventory **€210,000***

INCOME STATEMENT
Cost of goods sold (€800,000)..... **€800,000**

***€280,000 − €70,000 = €210,000**

Faithful representation qualitative characteristic is the reason to account for inventory at the lower of cost or NRV. Not revaluing the inventory to the lower NRV lends a biasness to the ending inventory which violates the reliability requirement.

The *Matching principle* (from Chapter 3: Accrual Accounting & Income) requires costs to be recorded in the period in which they contributed to gains. Since the impairment occurred during this period, not recording it would mean a misstatement of both this **year's and the subsequent year's net income.**

Responses may vary.

(15-20 min.) P 6-68A

Req. 1 (corrected income statements)

R. B. Video Sales
Income Statement (adapted; *amounts in millions*)
Years Ended 20X6, 20X5, and 20X4

	20X6		20X5		20X4	
Net sales **revenue**.....		$39		$36		$33
Cost of goods sold:						
Beginning inventory.....	$ 8*		$ 7*		$ 3	
Purchases.....	27		25		23	
Goods available.....	35		32		26	
Ending inventory.....	(6)		(8)*		(7)*	
Cost of goods sold.....		29		24		19
Gross profit.....		10		12		14
Operating expenses..		6		6		6
Net income.....		$ 4		$ 6		$ 8

*Throughout the period from year end 20X4 to year beginning 20X6, inventory was understated by $3 million.

Req. 2

The corrections did not change total net income over the three-year period. But the corrections drastically altered the trend of net income — from an increasing pattern to a decreasing pattern.

Req. 3

The shareholders will *not* be happy with a declining trend of net income because the company is losing ground with its profits.

(15-20 min.) P 6-77B

Req. 1 (corrected income statements)

Waterville Video Sales
Income Statement (adapted; *amounts in millions*)
Years Ended 20X6, 20X5, and 20X4

	20X6		20X5		20X4	
Net sales revenue.....		€42		€39		€36
Cost of goods sold:						
Beginning inventory.....	€ 12*		€ 11*		€ 8	
Purchases.....	33		31		29	
Goods **available**.....	45		42		37	
Ending inventory.....	(11)		(12)*		(11)*	
Cost of goods sold.....		34		30		26
Gross profit.....		8		9		10
Operating expenses.....		5		5		5
Net income.....		€ 3		€ 4		€ 5

*Throughout the period from year end 20X4 to year beginning 20X6, inventory was understated by €2 million.

Req. 2

The corrections did not change total net income over the three-**year period. But the corrections made the company's** trend of net income reflect a downward trend **—** with 20X5 net income decreasing from that of 20X4 and then continuing the drop in 20X6.

Req. 3

The shareholders will not be happy with the downward trend, since it appears to be continuing.

(20-30 min.) P 7-62A

Req. 1

ITEM	LAND	LAND IMPROVEMENTS	SALES BUILDING	GARAGE BUILDING	FURNITURE
(a)	$283,500			$ 76,500	
(b)	8,500				
(c)		$ 31,800			
(d)	900				
(e)	5,600				
(f)		1,200			
(g)			$ 400		
(h)			19,600		
(i)			515,000		
(j)				41,200	
(k)			9,100		
(l)		6,600*			
(m)		52,100			
(n)		7,500			
(o)		4,840**	37,840**	1,320**	
(p)					$79,400
(q)					1,900
Totals	$298,500	$104,040	$581,940	$119,020	$81,300

Computations:

(a)	Land:	$315,000 / $400,000 × $360,000 = $283,500
	Garage building:	$ 85,000 / $400,000 × $360,000 = $ 76,500
(o)	Land improvements:	$ 44,000 × .11 = $ 4,840
	Sales building:	$ 44,000 × .86 = $37,840
	Garage building:	$ 44,000 × .03 = $ 1,320

*It is also correct to debit this cost to the Land account.

**Assuming the supervisor is a contractor, else, expense the salary.

Req. 2

Journal

DATE	ACCOUNT TITLES AND EXPLANATION	DEBIT	CREDIT
20X6			
Dec. 31	Depreciation Expense — Land Improvements ($104,040 / 20 × 8/12)	3,468*	
	Accumulated Depreciation — **Land Improvements**		3,468
31	Depreciation Expense — Sales Building **($581,940 / 40 × 8/12)**	9,699	
	Accumulated Depreciation — **Sales Building**		9,699
31	Depreciation Expense — Garage **Building ($119,020 / 40 × 8/12)**	1,984	
	Accumulated Depreciation — **Garage Building**		1,984
31	Depreciation Expense — **Furniture ($81,300 / 10 × 8/12)**	5,420	
	Accumulated Depreciation — **Furniture**		5,420

*$3,248 ($97,440 / 20 × 8/12) if $6,600 (l in *Req. 1*) is debited to Land.

Req. 3

This problem shows how to determine the cost of a plant asset. It also demonstrates the computation of depreciation for a variety of property, plant and equipment. Because virtually all businesses use property, plant and equipment, a **manager needs to understand how those assets' costs and** depreciation amounts are determined. Depreciation affects net income. Managers need to understand the meaning, components, and computation of net income because often their performance is measured by how much net income the business earns. This problem covers all these concepts with specific examples.

Responses will vary.

(20-30 min.) P 7-70B

Reg. 1

ITEM	LAND	LAND IMPROVEMENTS	SALES BUILDING	GARAGE	FURNITURE
(a)	€263,500			€ 76,500	
(b)	8,900				
(c)		€ 31,000			
(d)	400				
(e)	5,800				
(f)		1,400			
(g)			€ 700		
(h)			19,900		
(i)			510,000		
(j)				41,900	
(k)			9,000		
(l)		6,300*			
(m)		52,900			
(n)		7,000			
(o)		4,100**	35,260**	1,640**	
(p)					€79,200
(q)					1,100
Totals	278,600	102,700	574,860	120,040	80,300

Computations:

(a) Land: 310,000 / 400,000 × 340,000 = €263,500
Garage: 90,000 / 400,000 × 340,000 = € 76,500

(o) Land improvements: 41,000 × .10 = 4,100
Sales building: 41,000 × .86 = 35,260
Garage: 41,000 × .04 = 1,640

*It is also correct to debit this cost to the Land account.

** Assuming the supervisor is a contractor, else, expense the salary.

(continued) P 7-70B

Req. 2

Journal

DATE	ACCOUNT TITLES AND EXPLANATION	DEBIT	CREDIT
20X6			
Dec. 31	Depreciation Expense — Land		
	Improvements (102,700 / 15 × 8/12)…...	4,564*	
	Accumulated Depreciation — Land		4,564
	Improvements……		
31	Depreciation Expense —Office		
	Building (574,860 / 30 × 8/12)……..	12,775	
	Accumulated Depreciation — District Office		12,775
	Building……...		
31	Depreciation Expense — Garage		
	(120,040 /30 × 8/12)……..	2,668	
	Accumulated Depreciation — **Garage……**		2,668
31	Depreciation Expense —		
	Furniture (80,300 / 8 × 8/12)……	6,692	
	Accumulated Depreciation — **Furniture……**		6,692

*4,284 (96,400 / 15 × 8/12) if 6,300 (l in *Req. 1*) is debited to Land.

Req. 3

This problem shows how to determine the cost of a plant asset. It also demonstrates the computation of depreciation for a variety of property, plant and equipment. Because virtually all businesses use property, plant and equipment, a **manager needs to understand how those assets' costs and** depreciation are determined. Depreciation affects net income. Managers need to understand the meaning, components, and computation of net income because often their performance is measured by how much net income the business earns. This problem covers all these concepts with specific examples.

Responses will vary.

(20-25 min.) P 7-67A

Req. 1

	Millions
Cost of PPE	$4,830
Less: Accumulated depreciation	(2,126)
Book value, net	$2,704

Req. 2

Evidences of the purchase of property, plant and equipment and goodwill:

1. Historical cost of PPE increased on the balance sheet.
2. Goodwill increased on the balance sheet.
3. **Statement of cash flows reported "Additions to property, plant, and equipment."**

Req. 3

Property, Plant, and Equipment			
2/28/X5 Bal.	4,199	Cost of assets sold in 20X6	76
Purchased during 20X6	707		
2/28/X6 Bal.	4,830		

Accumulated Depreciation			
Accum. depr. of assets sold in 20X6	60	2/28/X5 Bal.	1,726
		Depr. during 20X6	460
		2/28/X6 Bal.	2,126

Goodwill			
2/28/X5 Bal.	519		
Purchased during 20X6	39*		
2/28/X6 Bal.	558		

*Determined by deduction, since there was no impairment on goodwill.

(20-25 min.) P 7-75B

Req. 1

	Millions
Cost of PPE……	**€** 4,836
Less: Accumulated depreciation…….	(2,123)
Book value of PPE……	**€** 2,713

Req. 2

Evidences of the purchase of property, plant and equipment and goodwill:

1. Historical cost of PPE increased on the balance sheet.
2. Goodwill increased on the balance sheet.
3. **Statement of cash flows reported "Additions to property, plant and equipment."**

Req. 3

Property, Plant, and Equipment			
2/28/X5 Bal.	4,198	Cost of assets sold in 20X6	78
Purchased during 20X6	716		
2/28/X6 Bal.	4,836		

Accumulated Depreciation			
Accum. depr. of assets sold in 20X6	62	2/28/X5 Bal.	1,727
		Depr. during 20X6	458
		2/28/X6 Bal.	2,123

Goodwill		
2/28/X5 Bal..	511	
Purchased during 20X6	42*	
2/28/X6 Bal.	553	

*Determined by deduction, since there was no impairment on goodwill.

(15-20 min.) P 9-70A

a. Sales tax payable ($120,000 × .05) $6,000

b. Note payable, short-term $85,000
Interest payable ($85,000 × .04 × 4/12) 1,133

c. Unearned service revenue ($2,400×2/6)..... $800

d. Estimated warranty payable
($11,600 + $34,000 − $34,800) $10,800

e. Portion of long-term note payable due
within one year $35,000
Interest payable ($70,000 × .12) 8,400

(15-20 min.) P 9-79B

a.	Sales tax payable ($110,000 × .08)	$8,800
b.	Note payable, short-term	$82,000
	Interest payable ($82,000 × .04 × 4/12)	1,093
c.	Unearned service revenue ($1,200 × 2/6).....	$400
d.	Estimated warranty payable	
	($11,400 + $30,000 − $34,600)	$6,800
e.	Portion of long-term note payable due	
	within one year	$25,000
	Interest payable ($85,000 × .10)	8,500

(30-40 min.) P 9-73A

Req. 1

The 8% bonds issued when the market interest rate is 7% will be priced at a *premium*. They are relatively attractive in this market, so investors will pay a price above par value to acquire them.

Req. 2

The 8% bonds issued when the market interest rate is 9%will be priced at a *discount*. They are relatively unattractive in this market, so investors will pay less than par value to acquire them.

Using financial calculator, PV = 963,956 PV of annuity = 26.777

Using our formula: $\frac{36000}{.035}\left[1-\frac{1}{(1+0.035)^{20}}\right]+\frac{900000}{(1+0.035)^{20}}=963,956$

*Appendix B table does not have the required values.

Req. 3

	A	B	C	D	E
Period	Interest Payment (c% x Maturity)	Interest Expense (i% x E)	Premium Amortization (A - B)	Premium Account Balance (D-C)	Bond Carrying Amount (Maturity + D)
0		0		63,956	963,956
1	36,000	33,738	2,262	61,694	961,694
2	36,000	33,659	2,341	59,354	959,354
3	36,000	33,577	2,423	56,931	956,931
4	36,000	33,493	2,507	54,424	954,424

Journal

	DATE	ACCOUNT TITLES AND EXPLANATION	DEBIT	CREDIT
	20X0			
a	Feb. 28	Cash	963,956	
		Premium on Bonds Payable		63,956
		Bonds Payable		900,000
		To issue bonds at a premium.		
b	Aug. 31	Interest Expense	33,738	
		Premium on Bonds Payable	2,262	
		Cash		36,000
		To pay interest and amortize bonds.		
c	Dec. 31	**Interest Expense……..**	22,439	
		Premium on Bonds Payable	1,561	
		Interest Payable……..		24,000
		To accrue interest and amortize bonds.		
	20X1			
d	Feb. 28	Interest Payable (from Dec. 31)	24,000	
		Interest Expense	11,220	
		Premium on Bonds Payable	780	
		Cash		36,000
		To pay interest and amortize bonds.		

Req. 4 (reporting the liabilities on the balance sheet at December 31, 20X0)

Current liabilities:		
Interest payable……		$ 24,000
Non-current liabilities:		
Bonds payable……	$900,000	
Add: Premium on bonds payable…..	60,133*	
		960,133

*63,956 – 2,262 –1,561 = 60,133

Note that this balance sheet takes place between c and d from the previous part.

(30-40 min.) P 9-82B

Req. 1

The 6% notes issued when the market interest rate is 5% will be priced at a *premium*. They are relatively attractive in this market, so investors will pay a price above par value to acquire them.

Req. 2

The 6% notes issued when the market interest rate is 7%will be priced at a discount. They are relatively unattractive in this market, so investors will pay less than par value to acquire them.

Using financial calculator, PV = 2,025,925 PV of annuity = 37.517

Using our formula: $\frac{54000}{.025}\left[1-\frac{1}{(1+0.025)^{40}}\right]+\frac{1800000}{(1+0.025)^{40}}=2,025,925$

*Appendix B table does not have the required values.

Req. 3

	A	B	C	D	E
Period	Interest Payment (c% x Maturity)	Interest Expense (i% x E)	Premium Amortization (A - B)	Premium Account Balance (D-C)	Bond Carrying Amount (Maturity + D)
0		0		225,925	2,025,925
1	54,000	50,648	3,352	222,573	2,022,573
2	54,000	50,564	3,436	219,137	2,019,137
3	54,000	50,478	3,522	215,616	2,015,616
4	54,000	50,390	3,610	212,006	2,012,006

Journal

DATE	ACCOUNT TITLES AND EXPLANATION	DEBIT	CREDIT
20X0			
a. Feb. 28	**Cash**.....	2,025,925	
	Premium **on Bonds Payable**.....		225,925
	Bonds **Payable**.....		1,800,000
	To issue bonds payable at a premium.		
b. Aug. 31	**Interest Expense**.....	50,648	
	Premium **on Bonds Payable**.....	3,352	
	Cash.....		54,000
	To pay interest and amortize bonds payable.		
c. Dec. 31	**Interest Expense (50,564 x 4/6)**.....	33,709	
	Premium on Bonds Payable(3,436 x 4/6)....	2,291	
	Interest Payable ($54,000×**4/6)**.....		36,000
	To accrue interest and amortize bonds payable.		
20X1			
d. Feb. 28	**Interest Payable (from Dec. 31)**.....	36,000	
	Interest Expense(50,564-**33,709)**.....	16,855	
	Premium on Bonds Payable(3,436 **–** 2,291)....	1,145	
	Cash ($1,800,000 × .06 × 6/12).....		54,000
	To pay interest and amortize bonds payable.		

(continued) P 9-82B

Req. 4 (reporting the liabilities on the balance sheet at December 31, 20X0)

Current liabilities:

Interest payable		$36,000

Non-current liabilities:

Notes payable	$1,800,000	
Add: Premium on notes payable	220,282*	
		2,020,282

*225,925 – 3,352 – 2,291 = 220,282

Note that this balance sheet takes place between c and d from the previous part.

(20-30 min.) P 9-77A

Req. 1

TO: Management of Paulus Sporting Goods
FROM: Student Name
SUBJECT: Advantages and disadvantages of borrowing versus issuing shares to raise cash for expansion

Raising money by borrowing has at least two advantages over issuing common shares. Borrowing does not change the present ownership of the business. It enables the present owners to keep their proportionate interests in the business and to carry out their plans without interference from a new group of shareholders. Under normal conditions, borrowing results in a higher earnings per share of common shares because the interest expense on the debt is tax-deductible. And higher earnings per share usually lead to higher share prices for company owners.

The main disadvantage of borrowing is that the debt increases the financial risk of the company. The principal and the related interest expense must be paid whether the company is earning a profit or not. If times get sufficiently bad, the debt burden could threaten the ability of the business to continue as a going concern.

The main advantage of issuing shares is that owners avoid the burden of making interest and principal payments on the debt. Issuing shares creates no liability to pay anything to the owners. If the directors consider it necessary, they can refuse to pay dividends in order to conserve cash. Therefore, it is safer to issue shares.

One disadvantage of issuing shares is dilution of the ownership interests of existing shareholders if the purchasers of new shares are outsiders. The new shareholders may have different ideas about how to manage the business and that may pose difficulties for the original shareholder group. Another disadvantage of issuing shares is that earnings per share are usually lower because of (1) the greater number of shares of shares outstanding, and (2) the non-tax-deductibility of dividends paid on the shares.

There is insufficient information available upon which to make **a decision. Sporting Goods' management must prepare** budgets which indicate the impact of the new stores in terms of net income and cash flow. Management must also estimate the cost of borrowing the funds.