Part II Quiz Solutions

I. Match each term with the appropriate description.

1) E	Cash equivalents	(A)	Beginning inventory + purchases
2) H	Aging receivables	(B)	Values inventory closer to replacement cost during rising prices
3) A	Goods available for sale	(C)	Maximum allowable depreciation
4) J	LIFO	(D)	All reasonable cost to put into condition and position for use
5) B	FIFO	(E)	U.S. treasury bills
6) F	Book value	(F)	Cost - accumulated depreciation
7) I	Double declining balance method	(G)	Writing off natural resources
8) C	Depreciable base	(H)	Percentage of current receivables
9) D	Cost of plant and equipment	(I)	No longer allowed for tax purposes
10) G	Depletion	(J)	Lowers taxes during rising prices

II. Answer the following true or false and fill in the blank questions.

A. T **F** Short-term investments last 6 to 12 months. **(They mature in 90 days or less.)**

B. **T** F Cash equivalents carry little risk **(because of their short maturity).**

C. T **F** The balance of allowance for bad debts should never affect bad debt expense **(used with current receivables).**

D. **T** F If prices rise continually, the average cost method will value inventory between LIFO and FIFO.

E. T **F** The IRS only allows for proportional depreciation of assets **(straight-line is only required for real property).**

F. Cash equivalents mature within 90 days.

G. Accrual accounting allows for the direct write-off of bad debts provided the expense is immaterial.

H. Retailers buy goods from a wholesaler or manufacturer and store them as inventory.

I. Write-off of a natural resource is charged to accumulated depletion.

J. Amortization is the term used to describe the write-off of an intangible asset.

III. On December 31, 1996, before adjustments, the allowance for doubtful accounts had a negative balance of $4,000. Calculate the bad debt expense taken under each of these independent situations.

A. Aging was used to estimate that $84,000 of accounts receivable would be uncollectible.
   1. The objective of this method is to make the balance in the allowance equal to the expected uncollectible receivables.
   2. Since their is a negative balance, this year's adjustment (expense) must be $88,000.
   3. This number makes sense for two reasons.
      a. The new balance will be $84,000 and if the estimate is correct, the balance after accounting for this period will be zero.
      b. A negative balance in the allowance accounts means bad debt expense had been underestimated by $4,000. This $4,000 expense is taken in year two because $84,000 + $4,000 = $88,000.

B. The company estimates that 1.65% of its 1996 credit sales of $5,500,000 will not be collected.
   1. This method does not attempt to analyze the amount of current accounts receivable that will not be collected.
   2. The balance of $4,000 could be from this year, last year, or whenever.
   3. The $90,750 estimate ($5,500,000 x .0165) is charged to bad debt expense, and the new balance in the allowance account is $86,750 ($90,750 - $4,000).

IV. Estimate bad debt expense by aging receivables.

Time Past Due	Percent Uncollectible	Receivable Amount	Amount Uncollectible
1 - 30	2.50	$225,000	.0250 x $225,000 = $ 5,625.00
31 - 60	2.75	155,000	.0275 x $155,000 = 4,262.50
61 - 90	4.00	90,000	.0400 x $90,000 = 3,600.00
Over 90	4.50	50,000	.0450 x $50,000 = 2,250.00
	Total	$520,000	$15,737.50

V. Calculate ending inventory in both units and dollars given the following information and using the Last-In, First-Out method of inventory valuation.

A. Problem information

1. The January 1, 1997, beginning inventory consisted of two purchases. The first was on November 14, 1996. It consisted of 100 units costing $5 each. The second purchase was on December 18, 1996. It consisted of 50 units costing a total of $300.
2. The company purchased 200 units on January 10, 1997, paying $1,300.
3. On January 12, 225 units were sold.
4. The company purchased 150 units on January 20, 1997, paying $1,050.
5. On February 12, 150 units were sold.

Perpetual Inventory Costing Using LIFO										
		Purchases			Cost of Goods Sold			Inventory		
Date	Explanation	Units	Unit Cost	Total Cost	Units	Unit Cost	Total Cost	Units	Unit Cost	Total Cost
01/1/97	Beginning Inventory							100 50	5.00 6.00	500.00 300.00
01/10/97	Purchase of 200 Units	200	6.50	1,300				100 50 200	5.00 6.00 6.50	500.00 300.00 1,300.00
01/12/97	Sale of 225 Units				200 25	6.50 6.00	1,300.00 150.00	100 25	5.00 6.00	500.00 150.00
01/20/97	Purchase of 150 Units	150	7.00	1,050				100 25 150	5.00 6.00 7.00	500.00 150.00 1,050.00
02/12/97	Sold 150 Units				150	7.00	1,050.00	100 25	5.00 6.00	500.00 150.00

B. Cost of goods available for sale during the period were $3,150 .

Beginning inventory = $500 + $300 = $800
Purchases = $1,300 + $1,050 = $2,350
Cost of goods available for sale = beginning inventory + purchases = $800 + $2,350 = $3,150

C. What was the highest unit cost of goods purchased during 1997? $7.00 .
Two purchases were made, one for $6.50 and one for $7.00.

VI. Use the following data and the average cost method of periodic inventory valuation to calculate the value of a 500-unit inventory. State the advantages and disadvantages of this method over other inventory valuation methods using this data.

	Units	Total Cost of Purchase
Beginning Balance	150	$ 300
Purchase of April 7	275	600
Purchase of June 27	325	750
Purchase of October 5	450	1,050
Purchase of December 11	200	480
Total	1,400	$3,180

$$\text{Cost per Unit} = \frac{\text{Total Cost}}{\text{Total Units}} = \frac{\$3,180}{1,400} = 2.27$$

Inventory = Unit Cost x units = 2.27 x 500 = $1,135

Analysis
During rising prices, the average cost method gives an inventory value between that of LIFO and FIFO. This means it results in lower income and the delay of taxes when compared to FIFO, but not when compared to LIFO. It also values inventory closer to replacement cost when compared to LIFO, but not when compared to FIFO.

VII. A $55,000 machine has a useful life of five years and a residual value of $5,000. Calculate the book value for this machine after two years using two different methods. Show all work.

A. Name of method #1 straight-line method

$$\text{Annual Depreciation} = \frac{1}{\text{Useful Life}} (\text{Cost - Residual Value})$$

$$= \frac{1}{5}(\$55{,}000 - \$5{,}000)$$

$$= \$10{,}000$$

B. Name of method #2 double-declining balance method

$$D = \frac{2}{UL}(C - AD)$$

$$= \frac{2}{5}(\$55{,}000 - 0)$$

$$= \$22{,}000$$

$$D = \frac{2}{UL}(C - AD)$$

$$= \frac{2}{5}(\$55{,}000 - 22{,}000)$$

$$= \$13{,}200$$

Comparing Depreciation Methods				
	Straight-Line		Double-Declining Balance	
Year	Depreciation	Book Value	Depreciation	Book Value
1	$10,000	$45,000	$22,000	$33,000
2	$10,000	$35,000	$13,200	$19,800

VIII. Why would a company choose the methods described in problem VII?

A. The straight-line method has higher profits in the beginning. In addition, asset values will be higher on the balance sheet. A company might prefer this even though it means higher taxes.

B. By accelerating depreciation, the double-declining balance method recovers a higher percentage of asset cost in the beginning. This delays taxes.

X. On October 1, 1998, Your OK Corporation purchased a $68,000 machine. Its useful life was 10 years with a residual value of $8,000. Using the straight-line method, calculate depreciation taken each year of the machine's useful life.

$$\text{Annual Depreciation} = \frac{1}{\text{Useful Life}} (\text{Cost - Residual Value})$$

$$= \frac{1}{10} (\$68{,}000 - \$8{,}000)$$

$$= \$6{,}000$$

Year	1	2 - 10	11
Depreciation	3/12($6,000) = $1,500	$6,000	9/12($6,000) = $4,500

X. The XYZ Company has a $96,000 machine with a 10-year useful life and a residual value of $6,000. After five years of straight-line depreciation, the machine is not wearing well and is expected to last a total of eight years and have half its original residual value. Calculate the new annual depreciation.

Original Depreciation Per Year

Cost $96,000
Residual Value 6,000
Rate is 1/10
D = (1/10) x $90,000 = $9,000

Book Value After Five Years

Book Value = Cost - Acc. Dep.
= $96,000 - 5 x $9,000
= $96,000 - $45,000
= $51,000

Revised Depreciation

Rate is 1/3 (8 years - 5 years)
Residual value is .5($6,000) = $3,000
D = (1/3)($51,000 - $3,000)
= 1/3($48,000)
= $16,000