

## **TEST #3 REVIEW SESSION, NOVEMBER 29, 2008, 12:30 - 3:30 p.m.**

### **CH. 7 – REPORTING AND ANALYZING RECEIVABLES**

→ We began our tour of the balance sheet with chapter 5 – Inventories, then examined chapter 6 – Cash. Continuing our tour, we now examine the next-most liquid current asset: receivables. Receivables – both Accounts Receivable and Notes Receivable – represent amounts owed to the company by another party. Receivables are assets because they do have value. A company can borrow money using receivables as collateral.

#### **[1] – Describe accounts receivable and how they occur and are recorded.**

- Accounts receivable (AR) represent amounts owed by customers for credit sales.
- Open-end credit.
- AR are recognized by debiting AR and crediting sales revenue at the time of the sale.
- Bank card transactions are usually treated as cash sales, since they are deposited the same day.

#### **[2] – Account for uncollectible accounts.**

1. (Direct write-off: not acceptable under GAAP. Violates the matching principle.)
2. ALLOWANCE METHOD – matches the estimated loss (expense) from uncollectible AR with sales in the same period. Requires an adjusting entry at the end of the year, DR Bad debt expense, CR Allowance for Doubtful Accounts (contra-asset account).
3. Writing off a specific uncollectible account: DR Allowance for Doubtful Accounts, CR AR.

#### **[3] – Methods for estimating uncollectible accounts.**

1. **Percent-of-Sales method**: Bad debt expense = percent of sales.
2. **Accounts Receivable methods**: Bad debt expense = adjustment needed to Allowance account so its balance equals the percent of the ending receivables balance.

**QS7-3, QS7-4**

#### **[4] – Describe a note receivable and the computation of its maturity date and interest.**

- A promissory note is a specific written promise to pay a specified amount, usually with specified interest and by a specified date.
- Closed-end credit.
- Interest is computed using the simple interest formula:  $I = PRT$ .

#### **[5] – Record the receipt of a note receivable.**

1. Record a sale: DR Notes receivable, CR Sales
2. Change an AR to a NR: DR Notes receivable, CR AR

**[6] – Record the payment or dishonoring of a note.**

1. Payment: DR cash, CR NR, CR Interest Revenue
2. Dishonor: DR AR, CR NR, CR Interest revenue
3. End-of-period adjusting entry: DR Interest receivable, CR Interest revenue

(QS7-5)

**[7] – Compute accounts receivable turnover and use it to help assess financial condition.**

- AR turnover = Net (credit) sales / Avg. AR
- Measures effectiveness of managers in granting credit to customers to increase sales.
- Also measures effectiveness of collection efforts.

(QS7-7)

**Ch.7 Discussion questions, pg. 301: 1, 2, 4, 6, 8**

**Questions?**

Ch. 7 – Receivables: Practice exercises.

QS 7-3. Bad Debt Expense: Percent of Accounts Receivable method.

	<i>DATE</i>	<i>ACCOUNT</i>	<i>DEBIT</i>	<i>CREDIT</i>
[1].	_____	_____	_____	_____
		_____		

QS 7-4. Bad Debt Expense: Percent of Sales method.

	<i>DATE</i>	<i>ACCOUNT</i>	<i>DEBIT</i>	<i>CREDIT</i>
[1].	_____	_____	_____	_____
		_____		

QS 7-5. Notes receivable.

	<i>DATE</i>	<i>ACCOUNT</i>	<i>DEBIT</i>	<i>CREDIT</i>
[1].	8-2-2005	_____	_____	_____
		_____		

	<i>DATE</i>	<i>ACCOUNT</i>	<i>DEBIT</i>	<i>CREDIT</i>
[2].	_____	_____	_____	_____
		_____		
		_____		

QS 7-7. Accounts receivable turnover.

AR turnover = Credit sales / Avg. AR = \$ \_\_\_\_\_ / \$ \_\_\_\_\_ = \_\_\_\_\_ times

## CH. 8 – REPORTING AND ANALYZING LONG-TERM ASSETS

→ Continuing our tour of the balance sheet, we now look at assets which have a useful life of more than one year. These non-current assets are usually grouped into one of four categories on the balance sheet: [1] Investments, [2] Property, Plant & Equipment, [3] Intangibles, and [4] Other.

*Investments are tangible or intangible, have a useful life more than one year, are NOT used primarily to generate revenue. These include: L-T investments, stock in another company, land or building held for future use.*

### **[1] – Describe plant assets and issues in accounting for them.**

- **PLANT ASSETS** – [1] Tangible, [2] Useful life more than one year, [3] Used to generate revenue, [4] NOT USED UP in the process of generating revenue.
- Under the Matching Principle, the cost of a plant asset is spread out over the useful life of that asset. This process is called **DEPRECIATION**: “an orderly expensing of the cost of a plant asset over its useful life.”
- “Useful life” is not necessarily the same as physical life.
- LAND is never depreciated, but land improvements are depreciated.

### **[2] – Apply the cost principle to compute the cost of plant assets.**

- The cost of a plant asset is “**capitalized**” (added to assets on the balance sheet). These costs include the original cost of the asset plus all costs necessary to get the asset into productive use.
- A “**Lump-sum**” purchase cost is usually divided between Land and other asset accounts (Buildings, Machinery, etc.) based on appraised values or assessed values for tax purposes.

### **E8-1, E8-3**

### **[3] – Explain depreciation and the factors affecting its computation.**

- Depreciation is the orderly expiration (expensing) of the cost of a plant asset over its useful (productive) life.
- “Salvage” (residual) value is estimated at the time the asset is acquired.
- Accumulated Depreciation (contra-asset account). Credit balance shows accumulated total depreciation to-date.
- Book value = Original total asset cost minus accumulated depreciation.
- **An asset is never depreciated below its salvage value.**

### **[4] – Compute and record depreciation using the straight-line, units-of-production, and declining-balance methods.**

Depreciable cost = Total asset cost minus salvage value.

[1]. **STRAIGHT-LINE METHOD**: Depreciable cost divided by estimated useful life (in years) = annual depreciation expense.

[2]. **UNITS-OF-PRODUCTION METHOD**: Depreciable cost divided by estimated total units of production over useful life = rate per unit of production. Rate times units of production for the year = depreciation expense for the year.

**[3]. DECLINING-BALANCE METHOD (Accelerated).** Start with total original cost, temporarily ignoring salvage. For Double-declining-balance method, (1) calculate percentage of annual depreciation to depreciable cost under straight-line, (2) double that percentage, (3) multiply the original cost by the doubled percentage to get the first year's depreciation expense, (4) then for each subsequent year, calculate the remaining cost (book value) and multiply that amount by the doubled percentage to get that year's depreciation expense. (5) It may be necessary to "fudge" the last year's expense so the total accumulated depreciation does not exceed the **depreciable cost** (Here is where the salvage value re-enters the calculation).

→ **Recording depreciation (adjusting entry): DR Depreciation expense, CR Accumulated Depreciation**

**QS8-3, QS8-4, QS8-5**

**[5] – Compare and analyze alternative depreciation methods.**

- All methods are applications of the **matching principle**.
- Straight-line method results in the same amount being expensed each year. **Buildings**.
- Units-of-production method matches the cost of the asset with the amount of use it gets or production it generates each year. **Machinery, delivery trucks**.
- Accelerated methods expense more of the cost of the asset in its early life and less in later years. They are appropriate for assets which are more productive in their early years, less productive in later years. **Machinery, computers and office equipment**.
- Over the useful life of an asset, total depreciation will be the same regardless of which method is used.
- For tax purposes, the IRS requires MACRS. MACRS is not acceptable under GAAP for financial reporting purposes.

**[6] – Explain depreciation for partial years and changes in estimates.**

- For a partial year, depreciation is calculated for that part of the year the asset is used, up to the point it is disposed.
- If a change in estimate is required, take the remaining book value, subtract the revised salvage value to get the remaining depreciable cost. Divide by the revised remaining useful life.

**[7] – Distinguish between revenue and capital expenditures, and account for them.**

- A capital expenditure increases the asset's useful life or productive capacity, is added to the cost of the asset on the balance sheet, and is depreciated. **Betterments, extraordinary repairs**.
- A revenue expenditure (income statement expenditure) does not materially increase the asset's useful life or productive capability. This expenditure is expensed. **Ordinary repairs, maintenance**.

**[8] – Account for asset disposal through discarding or selling an asset.**

- Steps:
- [1] Record depreciation expense to-date
  - [2] Credit the asset account to remove balance
  - [3] Debit the accumulated depreciation account to remove balance
  - [4] Record any cash received or paid in the disposal
  - [5] Record any gain (CR) or loss (DR) to balance the transaction

**QS8-7**

**[9] – Account for natural resource assets and their depletion.**

Natural resources are expensed by **depletion**: straight-line or units-of-production method over the useful life of the asset. Accumulated depletion account (contra-asset) contains the depletion expensed to-date.

**[10] – Account for intangible assets.**

Intangible assets have no physical substance but are used to generate revenue: copyrights, patents, trademarks, franchises, goodwill. They may be expensed by **amortization** over their useful life. If useful life is indefinite, do not amortize. Goodwill is not amortized unless its value is impaired. There is no “accumulated amortization” account: Debit Amortization Expense, Credit asset account directly.

**[11] – Compute total asset turnover and apply it to analyze a company’s use of assets.**

Total asset turnover (TATO) = Net sales / Average total assets

→ *Measures the ability of the company’s assets to generate revenue.*

<b>QS8-11</b>
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**BALANCE SHEET PRESENTATION:**

Land		\$10,000
Buildings	\$75,000	
Less: Accumulated depreciation	<u>(15,000)</u>	60,000
Equipment	40,000	
Less: Accumulated depreciation	<u>(25,000)</u>	<u>15,000</u>
Total plant assets		\$85,000

The original cost of plant assets continues to be shown on the balance sheet as long as the asset is owned. Plant assets which are fully depreciated (i.e. have zero book value) will be shown as:

Equipment	40,000	
Less: Accumulated depreciation	<u>(40,000)</u>	\$ 0

***Discussion questions, pg. 339, 340: 1, 2, 5, 8, 10, 12.***

***Questions?***

Ch. 8 – Long-Term Assets: Practice exercises.

QS 8-3. Depreciation methods.

	Equipment cost	\$ _____
	Less: estimated salvage	_____
		-----
	Depreciable cost	\$ _____
		=====
	Years of useful life:	_____
	Est. number of concerts:	_____
2008 depreciation:	[1] Straight line	\$ _____
	[2] Units-of production	\$ _____

QS 8-4. Revised depreciation.

2009 depreciation:	[1] Straight line	\$ _____
	[2] Units-of production	\$ _____
2010 depreciation:	[1] Straight line	\$ _____
	[2] Units-of production	\$ _____

QS 8-5. Double-declining balance depreciation.

	Depreciable		x	Rate	=	Depreciation	Accumulated	Remaining
Year	Cost					Expense	Depreciation	Cost
2008	\$ _____	x	_____	=		\$ _____	\$ _____	\$ _____
2009	\$ _____	x	_____	=		\$ _____	\$ _____	\$ _____
2010	\$ _____	x	_____	=		\$ _____	\$ _____	\$ _____

QS 8-7. Disposal of assets.

	DATE	ACCOUNT	DEBIT	CREDIT
[1].	_____	_____	_____	
		_____	_____	
		_____		_____
		_____		_____
[2].	_____	_____	_____	
		_____	_____	
		_____		_____
[3].	_____	_____	_____	
		_____	_____	
		_____		_____
		_____		_____

QS 8-11. Total asset turnover (TATO).

TATO = Sales / Avg. total assets = \$ \_\_\_\_\_ / \$ \_\_\_\_\_ = \_\_\_\_\_ times

## CH. 9 – REPORTING AND ANALYZING CURRENT LIABILITIES

→Our tour of the balance sheet so far has focused on the left (asset) side. We now move to the right side to cover liabilities and equities. The left (asset) side of the balance sheet reports the **RESOURCES** of the business, while the right side reports the **SOURCES** of capital used to finance those resources. The firm has two broad sources of capital: it can either [1] borrow from creditors (liabilities) or [2] get capital from owners and investors (equities).

→ **Definition of a liability:** A liability is a **PRESENT OBLIGATION** arising from a **PAST TRANSACTION**, giving rise to a **FUTURE PAYMENT OF ASSETS OR SERVICES**.

### **[1] – Describe current and long-term liabilities and their characteristics.**

- **Current (Short term) liabilities** – obligations due within one year. Normally paid with current assets or other liabilities: AP, S-T NP, other payables (wages, taxes, etc.), warranty liabilities, unearned revenue, current portion of long-term debt.
- **Long-term liabilities** – obligations to be paid in more than one year: L-T NP, lease liabilities, bonds payable

### **[2] – Identify and describe known current liabilities.**

a.k.a. “Definitely determinable” liabilities: AP, taxes payable, unearned revenues, S-T Notes Payable

### **[3] – Prepare entries to account for short-term notes payable.**

- Note given to extend credit terms: DR AP, CR NP
- Borrow from a bank: DR Cash, CR NP
- End-of-period interest adjustment: DR Interest expense, CR Interest Payable
- Payment: DR NP  
DR Interest expense  
CR Cash

### QS9-4

### **[4] – Compute and record employee payroll deductions and liabilities.**

The employer acts as a tax collector, on behalf of the government, withholding taxes and remitting them to government entities: Federal WH, FICA and Medicare, State and local income tax. Also voluntary withholding: When payroll is written, CREDIT appropriate liability accounts, then DEBIT those accounts when withholdings are paid. **[APPENDIX 9A. FICA = 6.2%, Medicare = 1.45%]**

### **[5] – Compute and record employer payroll expenses and liabilities.**

Employers must match FICA and Medicare taxes withheld from employees: When payroll is written, DEBIT tax expense, CREDIT appropriate liability accounts, then DEBIT those accounts when obligations are paid. Employer pays federal (FUTA) and state (SUTA) unemployment taxes.

**[6] – Account for estimated liabilities, including warranties and bonuses.**

An estimated liability is a KNOWN OBLIGATION of an UNCERTAIN AMOUNT (but can be reasonably estimated): Employee health benefits, vacation benefits, warranties.  
 WARRANTIES – DR Warranty expense, CR Warranty payable, in same period as sale (Matching Principle). When warranty is paid, DR warranty payable, CR cash.

**QS9-8**

**[7] – Compute the times-interest-earned ratio and use it to analyze liabilities.**

T-I-E ratio = EBIT / Interest expense

*Measures firm's risk of its ability to pay interest.*

**QS9-10**

***Ch. 9 Discussion questions, pg. 381: 1, 2, 3, 8, 10***

***Questions?***

*Ch. 9 – Current Liabilities: Practice exercises.*

QS 9-4. Note payable.

[1]. Interest payable, 12-31-08:    \$\_\_\_\_\_

	DATE	ACCOUNT	DEBIT	CREDIT
[2].	_____	_____	_____	_____
		_____		_____
[3].	_____	_____	_____	_____
		_____		_____
		_____		_____

QS 9-8. Recording warranties.

*(Record warranty expense):*

	DATE	ACCOUNT	DEBIT	CREDIT
	_____	_____	_____	_____
		_____		_____
<i>(Warranty repair):</i>	_____	_____	_____	_____
		_____		_____

QS 9-10. Times-Interest-Earned (TIE).

TIE = EBIT / I = \$\_\_\_\_\_ / \$\_\_\_\_\_ = \_\_\_\_\_ times

## CH. 10 – REPORTING AND ANALYZING LONG-TERM LIABILITIES

→ Continuing our tour of the right side of the balance sheet, we now look at long-term (due in more than one year) sources of borrowed capital: bonds and notes. In this chapter, we learn (1) the characteristics of bonds, (2) payment patterns, (3) interest computations, (4) retirement, and reporting requirements.

### [1] – Compare bond financing with stock financing.

- A bond is an issuer's written promise to pay the **principal** (par value, **face amount**) at a specified future date (**maturity date**), with specified **interest** (**face rate**). It is debt, a liability for the issuer.
- Stock is ownership of a corporation. It is not debt. Represented by a stock certificate (shares).

#### **ADVANTAGES OF BONDS –**

- Bonds do not affect ownership or control of the firm. A bondholder is a creditor, not an owner.
- Interest on bonds is a tax-deductible expense for the firm.
- Bonds can increase return on equity (ROE). *Financial leverage*: If  $ROA > \text{cost of debt}$ , the difference goes to the owners.

#### **DISADVANTAGES OF BONDS –**

- Bonds can decrease ROE: If  $\text{cost of debt} > ROA$ , difference must be made up by owners.
- Bond principal and interest are legal obligations and must be paid in a timely manner, otherwise firm is in default.

### [2] – Prepare entries to record bond issuance and bond interest expense.

Issued at par: DR Cash, CR Bonds Payable  
Interest expense: DR Bond interest expense, CR Cash  
Paid at maturity: DR Bonds Payable, CR Cash

### [3] – Compute and record amortization of bond discount.

When the face rate of interest is less than the market rate, the bond is issued at a discount.

DR Cash  
DR Discount on Bonds Payable (contra account)  
CR Bonds Payable

Interest payment: DR Bond Interest expense  
CR Cash  
CR Discount on Bonds Payable (amortization)

Balance sheet presentation: Bonds Payable \$100,000  
Less: Discount 5,000 \$95,000

### [4] – Compute and record amortization of bond premium.

When the face rate of interest is greater than the market rate, the bond is issued at a premium:

DR Cash  
CR Bonds Payable  
CR Premium on Bonds Payable

Interest payment: DR Bond Interest expense  
DR Premium on Bonds Payable (amortization)  
CR Cash



## **APPENDIX 10A. – Present Value of Bonds and Notes.**

**Concept of Present Value:** *Money today is worth more than the promise of money tomorrow.* Why? Because money today can be invested, so that it will be worth more tomorrow. This is called the “**Time Value of Money**”. The Time Value of Money has nothing to do with inflation. It refers to money’s ability to earn interest over time.

**Compounding.** When we calculated short-term interest, we use the short-term interest formula:  $I=PRT$ . Calculating interest for more than one year, however, requires compounding, which means that after the first period, interest is figured on both the principal AND the interest that has been accumulated.

### **Future Value and Present Value, single amount.**

[1]. **FUTURE VALUE (FV)** is easier to understand: If you invest \$100 today at 6%, how much will you have

[a]. in one year? Answer:  $\$100 + (\$100 \times .06)$ , or  $\$100 \times 1.06 = \$106$ .

[b]. in two years? Answer:  $\$100 \times (1.06 \times 1.06)$ , or  $\$100 \times (1.06)^2 = \$112.36$ .

[c]. in three years? Answer:  $\$100 \times (1.06 \times 1.06 \times 1.06)$ , or  $\$100 \times (1.06)^3 = \$119.10$ .

**Short-cut:** Table B.2, page B-12 in your textbook. Find the column with the appropriate interest rate, go down the number of periods (years) to find the future value interest factor, then multiply the single amount by this factor to get the future value. FV of \$100 in three years @ 6% =  $\$100 \times 1.1910 = \$119.10$ .

[2]. **PRESENT VALUE (PV):** What is the amount needed to invest now at 6% to receive \$100

[a]. in one year? Answer:  $\$100 / 1.06 = \$94.34$ .

[b]. in two years? Answer:  $\$100 / (1.06)^2 = \$89.00$ .

[c]. in three years? Answer:  $\$100 / (1.06)^3 = \$83.96$ .

**Short-cut:** Table B.1, page B-12 in your textbook. Find the column with the appropriate interest rate, go down the number of periods (years) to find the present value interest factor, then multiply the single amount by this factor to get the present value. PV of \$100 in three years @ 6% =  $\$100 \times 0.8396 = \$83.96$ .

### **Future Value and Present Value of the same amount each period. This is called an ANNUITY.**

#### **Short-cut calculations:**

[3]. **FUTURE VALUE OF AN ANNUITY (FVA):** Table B.4, page B-13 in your textbook. FVA of \$100 to be invested each year for 3 years =  $\$100 \times 3.1836 = \$318.36$ .

[4]. **PRESENT VALUE OF AN ANNUITY (PVA):** Table B.3, page B-13 in your textbook. How much must be invested now at 6% to be able to withdraw \$100 each year for 3 years, and have nothing left after the last withdrawal? Answer:  $\$100 \times 2.6730 = \$267.30$ .

Calculating annual payment (including both principal and interest) on an instalment note: Divide amount of the note by the present value interest factor for an annuity (PVIFA), Table B.3, page B-13. For example, the annual payment on a 5-year \$50,000 8% note is  $\$50,000 / 3.9927 = \$12,522.85$ .

Ch. 10 – Current Liabilities: Practice exercises.

QS 10-3a. Bond issue, journal entries, discount.

	<i>DATE</i>	<i>ACCOUNT</i>	<i>DEBIT</i>	<i>CREDIT</i>
Issue:	_____	_____	_____	
		_____	_____	
First interest		_____		_____
Pmt:	_____	_____	_____	
		_____		_____
		_____		_____

QS 10-3b. Bond issue, journal entries, premium.

	<i>DATE</i>	<i>ACCOUNT</i>	<i>DEBIT</i>	<i>CREDIT</i>
Issue:	_____	_____	_____	
		_____		_____
First interest		_____		_____
Pmt:	_____	_____	_____	
		_____		_____
		_____		_____

QS 10-5. Bond retirement by call option.

	<i>DATE</i>	<i>ACCOUNT</i>	<i>DEBIT</i>	<i>CREDIT</i>
	_____	_____	_____	
		_____		_____
		_____		_____

QS 10-7. Computing payments on an installment note (Table B-3, Appendix B).

- (a). @4%: \$ \_\_\_\_\_
- (b). @8%: \$ \_\_\_\_\_
- (c). @12%: \$ \_\_\_\_\_

QS 10-9. Debt-to-Equity (D/E) Ratio.

$$D/E = \text{Total Liabilities} / \text{Total Equities} = \$\_\_\_\_\_\_ / \$\_\_\_\_\_\_ = \_\_\_\_\_\_$$