**Lease problems:**

**Homework 1 – due Tu March 6, 2012**

**Problem 2**

On January 1, Year 1, Burton Company leases equipment from Nelson Company for an annual lease rental of $10,000. The lease term is five years and the lessor’s interest rate implicit in the lease is 8%. The lessee’s incremental borrowing rate is 8.25%. The useful life o the equipment is five years, and its estimated residual value equals its removal cost. Annuity tables indicate that the present value of an annual lease rental of $1 (at 8% rate) is $3.993 (three dollars and 99.3 cents). The fair value of leased equipment equals the present value of the rentals. Assume the lease is capitalized.

1. Prepare accounting entries required by Burton for Year 1.
2. Compute and illustrate the effect on the income statement for the year ended Dec 31, Year 1, and for the balance sheet as of Dec. 31, Year 1.
3. Construct a table showing payments of interest and principal made every year for the five year lease term
4. Construct a table showing expenses charged tot eh income statement for the five year lease term if the equipment is leased. Show a column for amortization, interest and total expenses.
5. Discuss the income and cash flow implications from this capital lease.

**Problem 2**

On January 1, Borman Company, a lessee, entered into three non-cancellable leases for new equipment identified as J, K and L. None of the three leases transfers ownership of the equipment to Borman at the end of the lease term. For each of the three leases, the present value at the beginning of the lease term of the minimum lease payments excluding that portion of the payments representing executor costs such as insurance, maintenance, and taxes to be paid by the lessor, including any profit thereon, is 75% of the excess of the fair value of the equipment to the lessor at the inception of the lease over any related investment tax credit retained by the lessor and expected to be realized by the lessor. The following additional information is distinct for each lease:

Lease J does not contain a bargain purchase option; the lease term is equal to 80% of the estimated economic life of the equipment.

Lease K contains a bargain purchase option; the lease term is equal to 50% of the estimated economic life of the equipment.

Lease L does not contain a bargain purchase option; the lease term is equal to 50% of the estimated economic life of the equipment.

**Required;**

1. Explain how Borman Company should classify each of these three leases. Why?
2. Identify the amount, if any, Borman records as a liability at the inception of the lease for each of the three leases.
3. Assuming that Borman makes the minimum lease payments on a straight line basis, describe how Borman should record each minimum lease payment for each of these three leases.
4. Assess accounting practice in accurately portraying the economic reality for each lease.

**Lease Problems: Homework 1 due Mar 6, 2012**

**SOLUTION:  
Problem 1 (40 minutes)**

1. **1/1/Year 1 *Enter into Lease Contract***

**Leased Property under Capital Leases 39,930**

**Lease Obligation under Capital Leases 39,930**

**12/31/Year 1 *Payment of Rental***

**Interest on Leases 3,194.40 (1)**

**Lease Obligations under Capital Leases 6,805.60**

**Cash 10,000**

***Amortization of Property Rights***

**Amor. of Leased Property under Capital Leases 7,986 (2)**

**Leased Property under Capital Leases 7,986**

**(1) $39,930 x .08 = $3,194.40**

**(2) $39,930 ÷ 5 = $7,986**

**b.**

**Balance Sheet**

**December 31, Year 1**

**Assets Liabilities**

**Leased property under Lease Obligations under**

**capital leases…………… $31,944 (1) capital leases……. $33,124.40 (2)**

**Income Statement**

**For Year Ended December 31, Year 1**

**Amortization of leased property $ 7,986.00**

**Interest on leases 3,194.40**

**Total lease‑related cost for Year 1 $11,180.40 (3)**

**(1) $39,930 - $7,986 = $31,944**

**(2) $39,930 - $6,805.60 = $33,124.40**

**(3) To be contrasted to rental costs of $10,000 when no capitalization takes place.**

**c.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Payments of Interest and Principal | | | | |
|  | Total | Interest | Payment of | Principal |
| **Year** | **Payment** | **at 8%** | **Principal** | **Balance** |
|  |  |  |  | **$39,930.00** |
| **1** | **10,000** | **$3,194.40** | **$6,805.60** | **33,124.40** |
| **2** | **10,000** | **2,649.95** | **7,350.05** | **25,774.35** |
| **3** | **10,000** | **2,061.95** | **7,938.05** | **17,836.30** |
| **4** | **10,000** | **1,426.90** | **8,573.10** | **9,263.20** |
| **5** | **10,000** | **736.80** | **9,263.20** |  |
|  | **$50,000** | **$10,070.00** | **$39,930.00** | **—** |

**d.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Expenses to Be Charged to Income Statement | | | | |
|  | Lease |  |  | Total |
| **Year** | **Expense** | **Amortization** | **Interest** | **Expenses** |
| **1** | **$10,000** | **$ 7,986.00** | **$ 3,194.40** | **$11,180.40** |
| **2** | **10,000** | **7,986.00** | **2,649.95** | **10,635.95** |
| **3** | **10,000** | **7,986.00** | **2,061.95** | **10,047.95** |
| **4** | **10,000** | **7,986.00** | **1,426.90** | **9,412.90** |
| **5** | **10,000** | **7,986.00** | **736.80** | **8,722.80** |
|  | **$50,000** | **$39,930.00** | **$10,070.00** | **$50,000.00** |

**e. The income and cash flow implications from this capital lease are apparent in the solutions to parts *c* and *d*. The student should note that reported expenses exceed the cash flows in earlier years, while the reverse occurs in later years.**

**Problem 2 (30 minutes)**

**a. A lease should be classified as a capital lease when it transfers substantially all of the benefits and risks inherent to the ownership of property by meeting any one of the four criteria for classifying a lease as a capital lease. Specifically:**

* **Lease J should be classified as a capital lease because the lease term is equal to 80 percent of the estimated economic life of the equipment, which exceeds the 75 percent or more criterion.**
* **Lease K should be classified as a capital lease because the lease contains a bargain purchase option.**
* **Lease L should be classified as an operating lease because it does not meet any of the four criteria for classifying a lease as a capital lease.**

**b. Borman records the following liability amounts at inception:**

* **For Lease J, Borman records as a liability at the inception of the lease an amount equal to the present value at the beginning of the lease term of minimum lease payments during the lease term, excluding that portion of the payments representing executory costs such as insurance, maintenance, and taxes to be paid by the lessor, including any profit thereon. However, if the amount so determined exceeds the fair value of the equipment at the inception of the lease, the amount recorded as a liability should be the fair value.**
* **For Lease K, Borman records as a liability at the inception of the lease an amount determined in the same manner as for Lease J, and the payment called for in the bargain purchase option should be included in the minimum lease payments.**
* **For Lease L, Borman does not record a liability at the inception of the lease.**

**c. Borman records the MLPs as follows:**

* **For Lease J, Borman allocates each minimum lease payment between a reduction of the liability and interest expense so as to produce a constant periodic rate of interest on the remaining balance of the liability.**
* **For Lease K, Borman allocates each minimum lease payment in the same manner as for Lease J.**
* **For Lease L, Borman charges minimum lease (rental) payments to rental expense as they become payable.**

**d. From an analysis viewpoint, both capital and operating leases represent economic liabilities as they involve commitments to make fixed payments. The fact that companies can structure leases as "operating leases" to avoid balance sheet recognition is problematic from the perspective of analysis of assets. If the leased assets are used to generate revenues, they should be considered in ratios such as return on assets and other measures of financial performance and condition.**