1. Describe how the cost principle applies to plant assets.
2. Explain the concept of depreciation.
3. Compute periodic depreciation using the straight-line method, and contrast its expense pattern with those of other methods.
4. Describe the procedure for revising periodic depreciation.
5. Explain how to account for the disposal of plant assets.
6. Describe methods for evaluating the use of plant assets.
7. Identify the basic issues related to reporting intangible assets.
8. Indicate how long-lived assets are reported in the financial statements.

**Plant Assets**

- Determining the cost of plant assets
- Accounting for plant assets
- Analyzing plant assets

**Intangible Assets**

- Accounting for intangibles assets
- Types of intangibles assets
- Financial statement presentation of long-lived assets

**Determining the Cost of Plant Assets**

**Cost Principle** - record plant assets at cost.
Cost consists of all expenditures necessary to acquire an asset and make it ready for its intended use.

Revenue expenditure - expensed immediately.
Capital expenditures - included in a plant asset account.

**Statement Presentation of Long-Lived Assets**

<table>
<thead>
<tr>
<th>The Coca-Cola Company</th>
<th>The Coca-Cola Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balancing Sheet (partial)</td>
<td>Balancing Sheet (partial)</td>
</tr>
<tr>
<td>in millions</td>
<td>in millions</td>
</tr>
<tr>
<td>Property, plant, and equipment</td>
<td></td>
</tr>
<tr>
<td>Land</td>
<td>7,731</td>
</tr>
<tr>
<td>Buildings and improvements</td>
<td>3,359</td>
</tr>
<tr>
<td>Machinery and equipment</td>
<td>8,024</td>
</tr>
<tr>
<td>Containers and other</td>
<td>1,290</td>
</tr>
<tr>
<td>Less: Accumulated depreciation</td>
<td>14,445</td>
</tr>
<tr>
<td>Land</td>
<td>5,951</td>
</tr>
<tr>
<td>Intangible assets</td>
<td>2,093</td>
</tr>
<tr>
<td>Trademarks with indefinite lives</td>
<td>3,158</td>
</tr>
<tr>
<td>Goodwill</td>
<td>4,256</td>
</tr>
<tr>
<td>Other intangible assets</td>
<td>2,610</td>
</tr>
<tr>
<td></td>
<td>$12,219</td>
</tr>
</tbody>
</table>

**Land**

All necessary costs incurred in making land ready for its intended use increase (debit) the Land account.

Costs typically include:
1. the cash purchase price,
2. closing costs such as title and attorney's fees,
3. real estate brokers' commissions, and
4. accrued property taxes and other liens on the land assumed by the purchaser.
Determine amount to be reported as the cost of the land.

Required: Determine amount to be reported as the cost of the land.

Cash price of property ($100,000)
Net removal cost of warehouse ($6,000)
Attorney’s fees ($1,000)
Real estate broker’s commission ($8,000)

Land

Land Improvements

Includes all expenditures necessary to make the improvements ready for their intended use.

- Examples are driveways, parking lots, fences, landscaping, and underground sprinklers.
- Limited useful lives.
- Expense (depreciate) the cost of land improvements over their useful lives.

Illustration: Lenard Company purchases a delivery truck at a cash price of $22,000. Related expenditures are sales taxes $1,320, painting and lettering $500, motor vehicle license $80, and a three-year accident insurance policy $1,600. Compute the cost of the delivery truck.

Cost of Delivery Truck

Buildings

Includes all costs related directly to purchase or construction.

Purchase costs:
- Purchase price, closing costs (attorney’s fees, title insurance, etc.) and real estate broker’s commission.
- Remodeling and replacing or repairing the roof, floors, electrical wiring, and plumbing.

Construction costs:
- Contract price plus payments for architects’ fees, building permits, and excavation costs.

Equipment

Include all costs incurred in acquiring the equipment and preparing it for use.

Costs typically include:
- Cash purchase price
- Sales taxes
- Freight charges
- Insurance during transit paid by the purchaser
- Expenditures required in assembling, installing, and testing the unit

Illustration: Assume that Hayes Manufacturing Company acquires real estate at a cash cost of $100,000. The property contains an old warehouse that is razed at a net cost of $6,000 ($7,500 in costs less $1,500 proceeds from salvaged materials). Additional expenditures are the attorney’s fee, $1,000, and the real estate broker’s commission, $8,000.

Determine amount to be reported as the cost of the land.

Determining the Cost of Plant Assets

Accounting for Plant Assets

Depreciation

The process of allocating to expense the cost of a plant asset over its useful (service) life in a rational and systematic manner.

- Process of cost allocation, not asset valuation.
- Applies to land improvements, buildings, and equipment, not land.
- Depreciable, because the revenue-producing ability of asset will decline over the asset’s useful life.

Factors in Computing Depreciation
**Accounting for Plant Assets**

**Illustration:** Assume that in January of 2005, UC Company purchased equipment for $75,000. The equipment would be useful to UC for three years.

**Question:**
What impact would this equipment have on UC's future Income Statements, if:
- UC used the cash basis of accounting
- UC used the accrual basis of accounting

**Illustration:** (Straight-Line Method)

<table>
<thead>
<tr>
<th>Year</th>
<th>Depreciable Cost</th>
<th>Rate</th>
<th>Annual Expense</th>
<th>Partial Year Expense</th>
<th>Accum. Deprec.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>$12,000</td>
<td>20%</td>
<td>$2,400</td>
<td>$2,400</td>
<td>$2,400</td>
</tr>
<tr>
<td>2011</td>
<td>12,000 x 20% = 2,400</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>12,000 x 20% = 2,400</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>12,000 x 20% = 2,400</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>12,000 x 20% = 2,400</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>12,000 x 20% = 2,400</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Journal entry:
- 2010: Depreciation expense 1,800
- Accumulated depreciation 1,800

**Illustration:** (Declining-Balance Method)

<table>
<thead>
<tr>
<th>Year</th>
<th>Book Value</th>
<th>Straight-line Rate</th>
<th>Annual Expense</th>
<th>Accum. Deprec.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>13,000</td>
<td>40%</td>
<td>$5,200</td>
<td>$5,200</td>
</tr>
<tr>
<td>2012</td>
<td>7,800</td>
<td>40%</td>
<td>3,120</td>
<td>8,320</td>
</tr>
<tr>
<td>2013</td>
<td>4,680</td>
<td>40%</td>
<td>1,872</td>
<td>10,192</td>
</tr>
<tr>
<td>2014</td>
<td>2,808</td>
<td>40%</td>
<td>1,123</td>
<td>11,315</td>
</tr>
<tr>
<td>2015</td>
<td>1,685</td>
<td>40%</td>
<td>685*</td>
<td>12,000</td>
</tr>
</tbody>
</table>

Journal entry:
- 2010: Depreciation expense 5,200
- Accumulated depreciation 5,200

* Computation of $674 ($1,685 x 40%) is adjusted to $685.
**Depreciation using Other Methods**

**Illustration:** (Declining-Balance Method)

<table>
<thead>
<tr>
<th>Year</th>
<th>Beginning Book Value</th>
<th>Depreciation Rate</th>
<th>Annual Expense</th>
<th>Partial Year Expense</th>
<th>Accum. Deprec.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>$13,000</td>
<td>40%</td>
<td>$5,200</td>
<td>$9/12</td>
<td>$3,900</td>
</tr>
<tr>
<td>2011</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td></td>
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<td>2013</td>
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<tr>
<td>2014</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Journal entry:

2010 Depreciation expense 3,900

Accumulated depreciation 3,900

**Units-of-Activity**

- Companies estimate total units of activity to calculate depreciation cost per unit.
- Expense varies based on units of activity.
- Depreciable cost is cost less salvage value.

**Accounting for Plant Assets**

**Plant Asset Disposals**

**Sale of Plant Assets**

Companies dispose of plant assets in three ways — Retirement, Sale, or Exchange (appendix).

If proceeds exceed the book value, a gain on disposal occurs.

If proceeds are less than the book value, a loss on disposal occurs.

**Illustration:** Assume that instead of selling the office furniture for $16,000, Wright sells it for $9,000.

**Illustration:** On July 1, 2010, Wright Company sells office furniture for $16,000 cash. The office furniture originally cost $60,000. As of January 1, 2010, it had accumulated depreciation of $41,000. Depreciation for the first six months of 2010 is $8,000. Prepare the journal entry to record depreciation expense up to the date of sale.

**Illustration:** Wright records the sale as follows.

**Accounting for Plant Assets**

**Plant Asset Disposals**

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**Illustration:** Wright records the sale as follows.
Illustration: Assume that Hobart Enterprises retires its computer printers, which cost $32,000. The accumulated depreciation on these printers is $32,000. The journal entry to record this retirement is?

Question: What happens if a fully depreciated plant asset is still useful to the company?

Accounting for Intangible Assets

Amortization of Intangibles

Limited-Life Intangibles:
- Amortize to expense.
- Credit asset account or accumulated amortization.

Indefinite-Life Intangibles:
- No foreseeable limit on time the asset is expected to provide cash flows.
- No amortization.

Intangible assets are rights, privileges, and competitive advantages that result from ownership of long-lived assets that do not possess physical substance. Limited life or an indefinite life.

Common types of intangibles:
- Patents
- Trademarks
- Copyrights
- Trade names
- Franchises or licenses
- Goodwill

To Buy or Lease?

A lease is a contractual agreement in which the owner of an asset (the lessor) allows another party (the lessee) to use the asset for a period of time at an agreed price.

Some advantages of leasing:
1. Reduced risk of obsolescence.
2. Little or no down payment.
3. Shared tax advantages.
4. Assets and liabilities not reported.

Capital lease - lessees show the asset and liability on the balance sheet.
Types of Intangible Assets

**Patents**
- Exclusive right to manufacture, sell, or otherwise control an invention for a period of 20 years from the date of the grant.
- Capitalize costs of purchasing a patent and amortize over its 20-year life or its useful life, whichever is shorter.
- Expense any R&D costs in developing a patent.
- Legal fees incurred successfully defending a patent are capitalized to Patent account.

Assume that National Labs purchases a patent at a cost of $60,000 on June 30. National estimates the useful life of the patent to be eight years. Prepare the journal entry to record the amortization for the six-month period ended December 31.

**Research and Development Costs**
Expenditures that may lead to patents, copyrights, new processes, and new products.

**Trademarks and Trade Names**
- Give the owner the exclusive right to reproduce and sell an artistic or published work.
- Copyright is granted for the life of the creator plus 70 years.
- Capitalize costs of acquiring and defending it.
- Amortized to expense over useful life.

**Franchises and Licenses**
- Contractual arrangement between a franchisor and a franchisee.
- Franchise (or license) with a limited life should be amortized to expense over the life of the franchise.
- Franchise with an indefinite life should be carried at cost and not amortized.

**Copyrights**
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- Amortized to expense over useful life.

**Goodwill**
- Includes exceptional management, desirable location, good customer relations, skilled employees, high-quality products, etc.
- Only recorded when an entire business is purchased.
- Goodwill is recorded as the excess of purchase price over the FMV of the identifiable net assets acquired.
- Internally created goodwill should not be capitalized.

**Copyright is granted for the life of the creator plus 70 years.**

**Amortized to expense over useful life.**

**Franchise (or license) with a limited life should be amortized to expense over the life of the franchise.**

**Franchise with an indefinite life should be carried at cost and not amortized.**

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SO 8 Indicate how long-lived assets are reported in the financial statements.

A difference between accrual-accounting net income and net cash provided by operating activities is caused by depreciation and amortization expense.

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