**EXERCISES: SET B**

**E9-1B** The following expenditures relating to plant assets were made by Laurie Company during the first 2 months of 2014.

1. Paid $5,000 of accrued taxes at time plant site was acquired.
2. Paid $200 insurance to cover possible accident loss on new factory machinery while the machinery was in transit.
3. Paid $850 sales taxes on new delivery truck.
4. Paid $17,500 for parking lots and driveways on new plant site.
5. Paid $250 to have company name and advertising slogan painted on new delivery truck.
6. Paid $8,000 for installation of new factory machinery.
7. Paid $900 for one-year accident insurance policy on new delivery truck.
8. Paid $75 motor vehicle license fee on the new truck.

*Instructions*

(a) Explain the application of the cost principle in determining the acquisition cost of plant assets.

(b) List the numbers of the foregoing transactions, and opposite each indicate the account title to which each expenditure should be debited.

**E9-2B** Marion Company incurred the following costs.

1. Sales tax on factory machinery purchased $ 5,000
2. Painting of and lettering on truck immediately upon purchase 700
3. Installation and testing of factory machinery 2,000
4. Real estate broker's commission on land purchased 3,500
5. Insurance premium paid for first year's insurance on new truck 880
6. Cost of landscaping on property purchased 7,200
7. Cost of paving parking lot for new building constructed 17,900
8. Cost of clearing, draining, and filling land 13,300
9. Architect's fees on self-constructed building 10,000

*Instructions*

Indicate to which account Marion would debit each of the costs.

**E9-3B** On March 1, 2014, Swiddle Company acquired real estate on which it planned to construct a small office building. The company paid $90,000 in cash. An old warehouse on the property was razed at a cost of $8,500; the salvaged materials were sold for $1,700. Additional expenditures before construction began included $1,100 attorney's fee for work concerning the land purchase, $5,000 real estate broker's fee, $7,600 architect's fee, and $14,000 to put in driveways and a parking lot.

*Instructions*

(a) Determine the amount to be reported as the cost of the land.

(b) For each cost not used in part (a), indicate the account to be debited.

**E9-4B** Tim McGraw has prepared the following list of statements about depreciation.

1. Depreciation is a process of asset valuation, not cost allocation.
2. Depreciation provides for the proper matching of expenses with revenues.
3. The book value of a plant asset should approximate its fair value.
4. Depreciation applies to three classes of plant assets: land, buildings, and equipment.
5. Depreciation does not apply to a building because its usefulness and revenue-producing ability generally remain intact over time.
6. The revenue-producing ability of a depreciable asset will decline due to wear and tear and to obsolescence.
7. Recognizing depreciation on an asset results in an accumulation of cash for replacement of the asset.
8. The balance in accumulated depreciation represents the total cost that has been charged to expense.
9. Depreciation expense and accumulated depreciation are reported on the income statement.
10. Four factors affect the computation of depreciation: cost, useful life, salvage value, and residual value.
Instructions
Identify each statement as true or false. If false, indicate how to correct the statement.

E9-5B Hilda Bus Lines uses the units-of-activity method in depreciating its buses. One bus was purchased on January 1, 2014, at a cost of $168,000. Over its 4-year useful life, the bus is expected to be driven 100,000 miles. Salvage value is expected to be $3,000.

Instructions
(a) Compute the depreciation cost per unit.
(b) Prepare a depreciation schedule assuming actual mileage was: 2014, 26,000; 2015, 32,000; 2016, 25,000; and 2017, 17,000.

E9-6B Winston Company purchased a new machine on October 1, 2014, at a cost of $120,000. The company estimated that the machine will have a salvage value of $12,000. The machine is expected to be used for 12,000 working hours during its 4-year life.

Instructions
Compute the depreciation expense under the following methods for the year indicated.
(a) Straight-line for 2014.
(b) Units-of-activity for 2014, assuming machine usage was 1,700 hours.
(c) Declining-balance using double the straight-line rate for 2014 and 2015.

E9-7B Sturme Company purchased a delivery truck for $28,000 on January 1, 2014. The truck has an expected salvage value of $2,000, and is expected to be driven 100,000 miles over its estimated useful life of 8 years. Actual miles driven were 16,000 in 2014 and 12,000 in 2015.

Instructions
(a) Compute depreciation expense for 2014 and 2015 using (1) the straight-line method, (2) the units-of-activity method, and (3) the double-declining-balance method.
(b) Assume that Sturme uses the straight-line method.
   (1) Prepare the journal entry to record 2014 depreciation.
   (2) Show how the truck would be reported in the December 31, 2014, balance sheet.

E9-8B Sara Kiran, the new controller of Kinnewick Company, has reviewed the expected useful lives and salvage values of selected depreciable assets at the beginning of 2014. Her findings are as follows.

<table>
<thead>
<tr>
<th>Type of Asset</th>
<th>Date Acquired</th>
<th>Cost</th>
<th>Accumulated Depreciation 1/1/14</th>
<th>Useful Life in Years</th>
<th>Salvage Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building</td>
<td>1/1/08</td>
<td>$800,000</td>
<td>$114,000</td>
<td>Old 40, Proposed 50</td>
<td>$40,000</td>
</tr>
<tr>
<td>Warehouse</td>
<td>1/1/09</td>
<td>100,000</td>
<td>19,000</td>
<td>Old 25, Proposed 20</td>
<td>5,000</td>
</tr>
</tbody>
</table>

All assets are depreciated by the straight-line method. Kennewick Company uses a calendar year in preparing annual financial statements. After discussion, management has agreed to accept Sara’s proposed changes.

Instructions
(a) Compute the revised annual depreciation on each asset in 2014. (Show computations.)
(b) Prepare the entry (or entries) to record depreciation on the building in 2014.

E9-9B Presented below are selected transactions at Specht Company for 2014.

Jan. 1 Retired a piece of machinery that was purchased on January 1, 2004. The machine cost $62,000 on that date. It had a useful life of 10 years with no salvage value.

June 30 Sold a computer that was purchased on January 1, 2011. The computer cost $40,000. It had a useful life of 5 years with no salvage value. The computer was sold for $14,000.

Dec. 31 Discarded a delivery truck that was purchased on January 1, 2010. The truck cost $39,000. It was depreciated based on a 6-year useful life with a $3,000 salvage value.
Instructions
Journalize all entries required on the above dates, including entries to update depreciation, where applicable, on assets disposed of. Specht Company uses straight-line depreciation. (Assume depreciation is up to date as of December 31, 2013.)

E9-10B Stellar Company owns equipment that cost $55,000 when purchased on January 1, 2011. It has been depreciated using the straight-line method based on estimated salvage value of $5,000 and an estimated useful life of 5 years.

Instructions
Prepare Stellar Company’s journal entries to record the sale of the equipment in these four independent situations.
(a) Sold for $28,000 on January 1, 2014.
(b) Sold for $28,000 on April 1, 2014.
(c) Sold for $11,000 on January 1, 2014.
(d) Sold for $11,000 on October 1, 2014.

E9-11B On July 1, 2014, McGiver Inc. invested $720,000 in a mine estimated to have 800,000 tons of ore of uniform grade. During the last 6 months of 2014, 100,000 tons of ore were mined and sold.

Instructions
(a) Prepare the journal entry to record depletion expense.
(b) Assume that the 100,000 tons of ore were mined, but only 80,000 units were sold. How are the costs applicable to the 20,000 unsold units reported?

E9-12B The following are selected 2014 transactions of Cyrus Corporation.
Jan. 1 Purchased a small company and recorded goodwill of $150,000. Its useful life is indefinite.
May 1 Purchased for $90,000 a patent with an estimated useful life of 6 years and a legal life of 20 years.

Instructions
Prepare necessary adjusting entries at December 31 to record amortization required by the events above.

E9-13B Lake Company, organized in 2014, has the following transactions related to intangible assets.

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2/14</td>
<td>Purchased patent (8-year life)</td>
<td>$560,000</td>
</tr>
<tr>
<td>4/1/14</td>
<td>Goodwill purchased (indefinite life)</td>
<td>$360,000</td>
</tr>
<tr>
<td>7/1/14</td>
<td>10-year franchise; expiration date 7/1/2024</td>
<td>$440,000</td>
</tr>
<tr>
<td>9/1/14</td>
<td>Research and development costs</td>
<td>$185,000</td>
</tr>
</tbody>
</table>

Instructions
Prepare the necessary entries to record these intangibles. All costs incurred were for cash. Make the adjusting entries as of December 31, 2014, recording any necessary amortization and reflecting all balances accurately as of that date.

E9-14B During 2014 Yemen Corporation reported net sales of $5,040,000 and net income of $1,500,000. Its balance sheet reported average total assets of $1,400,000.

Instructions
Calculate the asset turnover ratio.

*E9-15B Presented below are two independent transactions. Both transactions have commercial substance.

1. Range Co. exchanged old trucks (cost $64,000 less $22,000 accumulated depreciation) plus cash of $17,000 for new trucks. The old trucks had a fair value of $35,000.
2. Druid Inc. trades its used machine (cost $10,000 less $4,000 accumulated depreciation) for a new machine (which had a fair value of $9,000). Druid also paid cash of $3,000.
**Instructions**
(a) Prepare the entry to record the exchange of assets by Range Co.
(b) Prepare the entry to record the exchange of assets by Druid Inc.

*E9-16B* Jax’s Delivery Company and Jon’s Express Delivery exchanged delivery trucks on January 1, 2014. Jax’s truck cost $22,000. It has accumulated depreciation of $15,000 and a fair value of $5,000. Jon’s truck cost $10,000. It has accumulated depreciation of $8,000 and a fair value of $5,000. The transaction has commercial substance.

**Instructions**
(a) Journalize the exchange for Jax’s Delivery Company.
(b) Journalize the exchange for Jon’s Express Delivery.

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### PROBLEMS: SET C

**Determine acquisition costs of land and building.**
(LO 1)

**P9-1C** Jabah Company was organized on January 1. During the first year of operations, the following plant asset expenditures and receipts were recorded in random order.

<table>
<thead>
<tr>
<th>Debits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Accrued real estate taxes paid at time of purchase of real estate</td>
</tr>
<tr>
<td>2. Real estate taxes on land paid for the current year</td>
</tr>
<tr>
<td>3. Full payment to building contractor</td>
</tr>
<tr>
<td>4. Excavation costs for new building</td>
</tr>
<tr>
<td>5. Cost of real estate purchased as a plant site (land $75,000 and building $25,000)</td>
</tr>
<tr>
<td>6. Cost of parking lots and driveways</td>
</tr>
<tr>
<td>7. Architect’s fees on building plans</td>
</tr>
<tr>
<td>8. Installation cost of fences around property</td>
</tr>
<tr>
<td>9. Cost of demolishing building to make land suitable for construction of new building</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. Proceeds from salvage of demolished building</td>
</tr>
</tbody>
</table>

**Instructions**
Analyze the foregoing transactions using the following column headings. Insert the number of each transaction in the Item space, and insert the amounts in the appropriate columns. For amounts entered in the Other Accounts column, also indicate the account title.

<table>
<thead>
<tr>
<th>Item</th>
<th>Land</th>
<th>Buildings</th>
<th>Other Accounts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Accrued real estate taxes paid at time of purchase of real estate</td>
<td>$5,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Real estate taxes on land paid for the current year</td>
<td>7,500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Full payment to building contractor</td>
<td>500,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Excavation costs for new building</td>
<td>19,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Cost of real estate purchased as a plant site (land $75,000 and building $25,000)</td>
<td>100,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Cost of parking lots and driveways</td>
<td>18,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Architect’s fees on building plans</td>
<td>8,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Installation cost of fences around property</td>
<td>7,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Cost of demolishing building to make land suitable for construction of new building</td>
<td>17,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>Land $117,500 Buildings $527,000</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Compute depreciation under different methods.**
(LO 2)

**P9-2C** In recent years, Belize Company purchased three machines. Because of heavy turnover in the accounting department, a different accountant was in charge of selecting the depreciation method for each machine, and each selected a different method. Information concerning the machines is summarized below.

<table>
<thead>
<tr>
<th>Machine</th>
<th>Acquired</th>
<th>Cost</th>
<th>Salvage Value</th>
<th>Useful Life in Years</th>
<th>Depreciation Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1/1/10</td>
<td>$100,000</td>
<td>$5,000</td>
<td>10</td>
<td>Straight-line</td>
</tr>
<tr>
<td>2</td>
<td>1/1/12</td>
<td>$150,000</td>
<td>$10,000</td>
<td>8</td>
<td>Declining-balance</td>
</tr>
<tr>
<td>3</td>
<td>11/1/14</td>
<td>$100,000</td>
<td>$13,000</td>
<td>6</td>
<td>Units-of-activity</td>
</tr>
</tbody>
</table>

For the declining-balance method, the company uses the double-declining rate. For the units-of-activity method, total machine hours are expected to be 25,000. Actual hours of use in the first 3 years were: 2014, 2,000; 2015, 4,500; and 2016, 5,500.

**Instructions**
(a) Compute the amount of accumulated depreciation on each machine at December 31, 2014.

(a) Machine 2, 2013, $28,125
(b) If machine 2 had been purchased on May 1 instead of January 1, what would be the depreciation expense for this machine in (1) 2012 and (2) 2013?

**P9-3C** On January 1, 2014, Xanadu Company purchased the following two machines for use in its production process.

Machine A: The cash price of this machine was $55,000. Related expenditures included: sales tax $2,750, shipping costs $100, insurance during shipping $75, installation and testing costs $75, and $90 of oil and lubricants to be used with the machinery during its first year of operation. Xanadu estimates that the useful life of the machine is 4 years with a $5,000 salvage value remaining at the end of that time period.

Machine B: The recorded cost of this machine was $100,000. Xanadu estimates that the useful life of the machine is 4 years with a $10,000 salvage value remaining at the end of that time period.

**Instructions**

(a) Prepare the following for Machine A.

(1) The journal entry to record its purchase on January 1, 2014.

(2) The journal entry to record annual depreciation at December 31, 2014, assuming the straight-line method of depreciation is used.

(b) Calculate the amount of depreciation expense that Xanadu should record for machine B each year of its useful life under the following assumption.

(1) Xanadu uses the straight-line method of depreciation.

(2) Xanadu uses the declining-balance method. The rate used is twice the straight-line rate.

(3) Xanadu uses the units-of-activity method and estimates the useful life of the machine is 25,000 units. Actual usage is as follows: 2014, 5,500 units; 2015, 7,000 units; 2016, 8,000 units; 2017, 4,500 units.

(c) Which method used to calculate depreciation on machine B reports the lowest amount of depreciation expense in year 1 (2014)? The lowest amount in year 4 (2017)? The lowest total amount over the 4-year period?

**P9-4C** At the beginning of 2012, Faraday Company acquired equipment costing $200,000. It was estimated that this equipment would have a useful life of 5 years and a residual value of $20,000 at that time. The straight-line method of depreciation was considered the most appropriate to use with this type of equipment. Depreciation is to be recorded at the end of each year.

During 2014 (the third year of the equipment’s life), the company’s engineers reconsidered their expectations, and estimated that the equipment’s useful life would probably be 6 years (in total) instead of 5 years. The estimated residual value was not changed at that time. However, during 2016 the estimated residual value was reduced to $5,000.

**Instructions**

Indicate how much depreciation expense should be recorded for this equipment each year by completing the following table.

<table>
<thead>
<tr>
<th>Year</th>
<th>Depreciation Expense</th>
<th>Accumulated Depreciation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**P9-5C** At December 31, 2014, Ramadan Company reported the following as plant assets.

<table>
<thead>
<tr>
<th>Land</th>
<th>$ 2,000,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buildings</td>
<td>$20,000,000</td>
</tr>
<tr>
<td>Less: Accumulated depreciation—buildings</td>
<td>$8,000,000</td>
</tr>
<tr>
<td>Equipment</td>
<td>30,000,000</td>
</tr>
<tr>
<td>Less: Accumulated depreciation—equipment</td>
<td>4,000,000</td>
</tr>
<tr>
<td>Total plant assets</td>
<td>$40,000,000</td>
</tr>
</tbody>
</table>
During 2015, the following selected cash transactions occurred.

April 1 Purchased land for $1,200,000.
May 1 Sold equipment that cost $420,000 when purchased on January 1, 2011. The equipment was sold for $240,000.
June 1 Sold land purchased on June 1, 2005, for $1,000,000. The land cost $340,000.
July 1 Purchased equipment for $1,100,000.
Dec. 31 Retired equipment that cost $300,000 when purchased on December 31, 2005. No salvage value was received.

Instructions
(a) Journalize the above transactions. Ramadan uses straight-line depreciation for buildings and equipment. The buildings are estimated to have a 50-year useful life and no salvage value. The equipment is estimated to have a 10-year useful life and no salvage value. Update depreciation on assets disposed of at the time of sale or retirement.
(b) Record adjusting entries for depreciation for 2015.
(c) Prepare the plant assets section of Ramadan’s balance sheet at December 31, 2015.

P9-6C Nykea’s has equipment that cost $40,000 and that has been depreciated $25,000. Record the disposal under the following assumptions.
(a) It was scrapped as having no value.
(b) It was sold for $29,000.
(c) It was sold for $10,000.

P9-7C The intangible assets section of Papillon Company at December 31, 2014, is presented below.

| Patents ($100,000 cost less $10,000 amortization) | $90,000 |
| Copyrights ($60,000 cost less $24,000 amortization) | $36,000 |
| **Total** | **$126,000** |

The patent was acquired in January 2014 and has a useful life of 10 years. The copyright was acquired in January 2011 and also has a useful life of 10 years. The following cash transactions may have affected intangible assets during 2015.

Jan. 2 Paid $36,000 legal costs to successfully defend the patent against infringement by another company.
Jan.–June Developed a new product, incurring $235,000 in research and development costs. A patent was granted for the product on July 1. Its useful life is equal to its legal life.
Sept. 1 Paid $125,000 to an XGames star to appear in commercials advertising the company’s products. The commercials will air in September and October.
Oct. 1 Acquired a copyright for $210,000. The copyright has a useful life of 50 years.

Instructions
(a) Prepare journal entries to record the transactions above.
(b) Prepare journal entries to record the 2015 amortization expense for intangible assets.
(c) Prepare the intangible assets section of the balance sheet at December 31, 2015.
(d) Prepare the note to the financials on Praphaphorn’s intangibles as of December 31, 2015.

P9-8C Due to rapid turnover in the accounting department, a number of transactions involving intangible assets were improperly recorded by Chauser Company in 2014.

1. Chauser developed a new manufacturing process, incurring research and development costs of $110,000. The company also purchased a patent for $50,000. In early January, Chauser capitalized $160,000 as the cost of the patents. Patent amortization expense of $8,000 was recorded based on a 20-year useful life.
2. On July 1, 2014, Chauser purchased a small company and as a result acquired goodwill of $200,000. Chauser recorded a half-year’s amortization in 2014, based on a 50-year life ($2,000 amortization). The goodwill has an indefinite life.

Instructions
Prepare all journal entries necessary to correct any errors made during 2014. Assume the books have not yet been closed for 2014.
Mylar Corporation and Troy Corporation, two corporations of roughly the same size, are both involved in the manufacture of canoes and sea kayaks. Each company depreciates its plant assets using the straight-line approach. An investigation of their financial statements reveals the following information.

<table>
<thead>
<tr>
<th></th>
<th>Mylar Corp.</th>
<th>Troy Corp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net income</td>
<td>$300,000</td>
<td>$325,000</td>
</tr>
<tr>
<td>Sales revenue</td>
<td>1,200,000</td>
<td>997,500</td>
</tr>
<tr>
<td>Average total assets</td>
<td>1,000,000</td>
<td>1,050,000</td>
</tr>
<tr>
<td>Average plant assets</td>
<td>750,000</td>
<td>770,000</td>
</tr>
</tbody>
</table>

**Instructions**

(a) For each company, calculate the asset turnover ratio.

(b) Based on your calculations in part (a), comment on the relative effectiveness of the two companies in using their assets to generate sales and produce net income.