Practice Set   PLANT AND EQUIPMENT

I.   DEPRECIATION METHODS

Shortly after starting the Video Showcase, Linda invested in television repair diagnostic equipment valued at $16,000 with $1,000 residual value and useful life of 5 years. Linda expected to make 5,000 repair transactions over 5 years with 1,000 transactions the first year. Calculate 5 years of depreciation using the following methods:

STRAIGHT LINE METHOD

$$\frac{\text{Cost - Residual Value}}{\text{Useful Life}}$$

$$= \frac{\$16,000 - \$1,000}{5 \text{ years}}$$

$$= \frac{\$15,000}{5 \text{ years}}$$

$$= \$3,000/\text{year}$$

SUM-OF-THE-YEARS-DIGITS METHOD

$D = (n \text{ th}/\Sigma n)$ (Cost - Residual Value)

$\Sigma n = 1 + 2 + 3 + 4 + 5 = 15$

5/15 ($16,000 - $1,000) = $5,000
4/15 ($16,000 - $1,000) = $4,000
3/15 ($16,000 - $1,000) = $3,000
2/15 ($16,000 - $1,000) = $2,000
1/15 ($16,000 - $1,000) = $1,000

DOUBLE DECLINING BALANCE METHOD

$D(2/n)$ (Cost - Accumulated Depreciation)

First Year = (2/5) ($16,000 - 0)

$\quad\quad\quad = (.4)($16,000) = $6,400$

Second Year = (.4) ($16,000 - $6,400) = $3,840

Third Year = (.4) ($16,000 - $10,240) = $2,304

Fourth Year = (.4) ($16,000 - $12,544) = $1,382

Fifth Year = $16,000 - ($12,544 + $1,382) = $2,074

$\quad$ $2,074 - $1,000 residual value equals

Final Year Equals $1,074

UNITS OF PRODUCTION METHOD
(first year only)

Dep./Unit = $\frac{\text{Cost-Residual Value}}{\text{Expected Production}} = \frac{\$16,000-\$1,000}{5,000} = \$3/\text{Unit}$

First Year Depreciation = (Units Produced)(Dep./Unit) = (1,000)($3)

$\quad\quad\quad\quad\quad\quad\quad\quad\quad\quad\quad\quad\quad = \$3,000$

PARTIAL DEPRECIATION USING STRAIGHT LINE METHOD
Given same data only purchased Sept. 1st.

First Year Dep. = $\frac{4}{12}$ (Cost - Residual Value)

$\quad\quad\quad = \frac{1}{3} \frac{(\$16,000 - \$1,000)}{5} = 1,000$

Years 2, 3, 4 and 5 = $3,000/year

$\quad$ Year 6 = $3,000 - $1,000 = $2,000

II. REVISING DEPRECIATION

Suppose after 3 years, the estimated useful life of the television diagnostic equipment described in Part I was increased from 5 to 6 years. Calculate the remaining depreciation per year using the Straight Line Method and a Jan. 1st purchase date.

Cost	$16,000
Less 3 years Depreciation	9,000
Book Value	$ 7,000

Depreciation = $\frac{\text{Book Value - Residual Value}}{\text{Remaining Life}}$

$$= \frac{\$7,000 - \$1,000}{3} = \$2,000$$

Answer: $2,000/year

III. EXTRAORDINARY REPAIRS AND BETTERMENTS

Assume the revision in Part II had not taken place. Suppose that in the process of making Ordinary Repairs after three years of use, Linda decided to upgrade her television diagnostic equipment. The total cost was $2,000 and remaining Useful Life increased from 2 to 4 years. Assume Straight Line Method, calculate depreciation per year.

Cost	$16,000
Less 3 years Depreciation	9,000
Book Value	$ 7,000
Extraordinary Repairs	2,000
Adjusted Book Value	$ 9,000

Depreciation = $\frac{\text{Book Value - Residual Value}}{\text{Remaining Life}}$

$$= \frac{\$9,000 - \$1,000}{4 \text{ years}}$$

$$= \$2,000/\text{year}$$

Answer: $2,000/year