CHAPTER 20

Non-current assets: Acquisition and depreciation

CONTENTS

ADDITIONAL PROBLEMS

Problem 20.1 Cost of various assets

Plentiful Ltd was organised early in 2002. During the first 9 months, the company acquired real estate for the construction of a building and other facilities. Operating equipment was purchased and installed and the company began operating activities in October 2002. The company's accountant, who was not sure how to record some of the transactions, opened a Property account and recorded debits and (credits) to the account as follows:

1.	Cost of real estate purchased as a building site	$ 170 000
2.	Paid architect's fee for design of new building	23 000
3.	Paid for the demolition of an old building on the building site purchased in (1)	28 000
4.	Paid land tax on the real estate purchased as a building site in (1)	1 700
5.	Paid excavation costs for the new building	15 000
6.	Made the first payment to the building contractor	250 000
7.	Paid for equipment to be installed in the new building	148 000
8.	Received from the sale of salvaged materials from the demolition of the old building	(6 800)
9.	Made final payment to the building contractor	350 000
10.	Paid interest on building loan during construction	22 000
11.	Paid freight on equipment purchased	1 900
12.	Paid installation costs of equipment	4 200
13.	Paid for repair of equipment damaged during installation	2 700
	Property account balance	$1 009 700

Required:

A. Prepare a schedule like the one following. Analyse each transaction, and enter the payment (receipt) in the appropriate column. Total the columns.

Item	Land	Building	Equipment	Other

B. Prepare a journal entry to close the $1 009 700 balance in the Property account and allocate the balances to their appropriate accounts.

C. Prepare an entry to record depreciation expense from 1 October to 31 December 2002. Useful lives and residual values are:

Building	25 years and $48 000
Equipment	5 years and $7000

Plentiful Ltd uses the straight-line depreciation method.

Solution

A.

PLENTIFUL LTD

Item	Land	Building	Equipment	Other
1.	$170 000			
2.		$23 500		
3.	28 000			
4.	1 700			
5.		15 000		
6.		250 000		
7.			$148 000	
8.	(6 800)			
9.		350 000		
10.				$22 000
11.			1 900	
12.			4 200	
13.				2 700
	$192 900	$638 000	$154 100	$24 700

B.

Land	192 900	
Building	638 000	
Equipment	154 100	
Damage Loss	2 700	
Interest Expense	22 000	
Property		1 009 700
To record reallocation of cost.		

C.

Depreciation Expense - Building	5 900	
Depreciation Expense - Equipment	7 355	
Accum. Depr. - Building		5 900
Accum. Depr. - Equipment		7 355
To record depreciation expense.		

Building = (638 000 − 48 000)/25 = $23 600 × 3/12 = $5 900

Equipment = (154 100 − 7 000)/5 = $29 420 × 3/12 = $7 355

Problem 20.2 Depreciation methods and partial years

Terrific Ltd operates four types of equipment. Because of their varied functions, management has decided that four different depreciation methods will be used to determine depreciation charges. Information on the equipment is summarised as follows:

Equipment type	Date acquired	Cost	Residual value	Useful life	Depreciation method
1	1/7/01	$ 95 400	$10 000	8 years	Reducing balance
2	1/7/01	148 000	15 000	6 years	Sum-of-years'-digits
3	1/1/02	27 500	5 500	10 years	Straight-line
4	15/4/02	39 700	4 600	20 000 hours	Production

Use of equipment type 4 was 1200 hours in the year ended 30 June 2002; 3200 hours in 2003; and 2600 hours in 2004.

Required:
Assuming the financial year ends on 30 June and that depreciation is recorded to the nearest month, calculate the depreciation charges for 2002, 2003 and 2004 by preparing a schedule with the following headings:

	Depreciation expense for year ended 30 June		
Equipment type	2002	2003	2004

Solution

TERRIFIC LTD
Depreciation expense for year ended 30 June

Equipment type	2002	2003	2004
1	23 850	17 888	13 416
2	38 000	31 667	25 333
3	1 100	2 200	2 200
4	2 016	5 616	4 550

Equipment type 1

Rate $= 1 - 8\sqrt{\frac{10\,000}{95\,400}} = 1 - .75 = .25$ or 25%

Date	Depreciation	Carrying Amount
1/7/01		$95 400
30/6/02	$23 850	71 550
30/6/03	17 888	53 662
30/6/04	13 416	40 246

Equipment type 2
Sum of years' digits – 6+5+4+3+2+1 = 21
Depreciable amount – $148 000 – $15 000 = $133 000
Depreciation y/e 30/6/02 – 133 000 × 6/21 = $38 000
Depreciation y/e 30/6/03 v 133 000 × 5/21 = $31 667
Depreciation y/e 30/6/04 – 133 000 × 4/21 = $25 333

Equipment type 3
Depreciable amount – $27 500 – $5 500 = $22 000
Straight-line depreciation per annum = $22 000 ÷ 10 = $2 200

Equipment type 4
Depreciable amount – $39 700 – $4 600 = $35 100
Depreciation y/e 30/6/02 – 35 100 × 1 200/20 000 = $2 016
Depreciation y/e 30/6/03 – 35 100 × 3 200/20 000 = 5 616
Depreciation y/e 30/6/04 – 35 000 × 2 600/20 000 = 4 550

Problem 20.3 Comprehensive problem

Over a 4-year period, Davis Ltd completed the following transactions affecting plant. The company uses straight-line depreciation and records depreciation to the nearest month.

2000		
Jan.	3	Purchased a new machine for a cash price of $57 000. Freight charges of $442 and installation expenditures of $1758 were paid in cash. The machine has an estimated useful life of 5 years and a residual value of $4000.
July	2	Purchased a used delivery van for $15 200. Cash expenditures were made to repaint the van at a cost of $655 and four new tyres costing $345. The van has an estimated useful life of 4 years and an expected residual value of $1000.
Dec.	31	Recorded depreciation expense.
2001		
July	30	Paid for repairs and maintenance on the machine and van at a cost of $228.
Dec.	31	Recorded depreciation expense.
2002		
June	26	Installed a fence around the company property at a cost of $5500. The fence has an estimated useful life of 10 years with no residual value. (Debit the cost to a Land Improvements account.)
Dec.	31	Recorded depreciation expense.
2003		
Jan.	5	Completely overhauled the machine purchased on 3 January 2000, at a cost of $12 000, after which the remaining useful life was estimated to be 3 years.
Dec.	31	Recorded depreciation expense.

Required:

A. Prepare journal entries to record the transactions of Davis Ltd.

B. Prepare a schedule showing the cost, accumulated depreciation and carrying amount of each asset after recording depreciation on 31 December 2003.

Solution

A.

DAVIS LTD

2000				
Jan.	3	Machinery	59 200	
		Cash at Bank		59 200
		To record acquisition of machine.		
July	2	Delivery Van	16 200	
		Cash at Bank		16 200
		To record acquisition of delivery van.		
Dec.	31	Depreciation Expense - Machinery	11 040	
		Depreciation Expense - Delivery Van	1 900	
		Accum. Depr. - Machinery		11 040
		Accum. Depr. - Delivery Van		1 900
		To record depreciation expense.		
		(59 200 - 4 000)/5= 11 040		
		(16 200 - 1 000)/4 = 3 800 x 6/12 = 1 900		
2001				
July	30	Repairs and Maintenance Expense	228	
		Cash at Bank		228
		To record repairs on machine and van.		
Dec	31	Depreciation Expense - Machinery	11 040	
		Depreciation Expense - Delivery Van	1 900	
		Accum. Depr. - Machinery		11 040
		Accum. Depr. - Delivery Van		1 900
		To record depreciation expense.		
2002				
June	26	Land Improvements	5 500	
		Cash at Bank		5 500
		To record installation of fence.		
Dec.	31	Depreciation Expense - Machinery	11 040	
		Depreciation Expense - Delivery Van	3 800	
		Depr. Expense - Land Improvements*	275	
		Accum. Depr. - Machinery		11 040
		Accum. Depr. - Delivery Van		3 800
		Accum. Depr. - Land Improvements		275
		To record depreciation expense.		
		* 5 500/10 = 550 × 6/12		

(*continued*)

2003				
Jan.	5	Machinery	12 000	
		Cash at Bank		12 000
		To record overhaul costs.		
Dec.	31	Depreciation Expense – Machinery	11 360	
		Depreciation Expense – Delivery Van	3 800	
		Depreciation Exp. – Land Improvements	550	
		Accum. Depr. – Machinery*		11 360
		Accum. Depr. – Delivery Van		3 800
		Accum. Depr. – Land Improvements		550
		To record depreciation expense.		

* Total cost (59 200 + 12 000)	$71 200
Accum. depr. to 1 Jan. 2005 (11 040 × 3)	33 120
Carrying amount	38 080
Estimated residual value	4 000
Amount to be depreciated	34 080
Remaining useful life	3 years
Depreciation expense per year	$11 360

B.

	Delivery van	Machinery	Land improvements
Cost	$16 200	$71 200	$5 500
Accum. depreciation	13 300	44 480	825
Carrying amount	$2 900	$26 720	$4 675

Problem 20.4 Correcting errors

At the end of Watson Ltd's financial year, 30 June 2003, the following items must be resolved before adjusting entries and financial statements are prepared:

1. On 1 July 2002, Watson Ltd purchased a used machine for $48 000 cash. The cost was debited to the Machinery account. Prior to use, additional cash expenditures were made for painting and repairing the machine, $3200, and installing and testing the machine, $2600. These additional expenditures were debited to Repairs and Maintenance Expense. The repairs and installation were completed on 1 October 2002, and the machine was put to use. The machine has an estimated useful life of 5 years with a residual value of $4000. Watson Ltd uses straight-line depreciation and records depreciation to the nearest month.
2. A small building and land were purchased on 2 July 2002, for $80 000 cash, debited to the Land account. The appraised values of the building and land were $75 000 and $25 000, respectively. The building has an estimated useful life of 20 years with a residual value of $6000. Watson Ltd uses straight-line depreciation for buildings.
3. A new truck was purchased on 1 March 2003; Watson Ltd paid cash of $33 500 and also obtained a 12-month loan payable for the amount of $12 600. The Trucks account was debited for $46 100. The truck has an estimated life of 4 years with a residual value of $13 300 and is to be depreciated by the reducing-balance method. However, due to an oversight, the business used the straight-line method.

Required:

A. Prepare journal entries on 30 June 2003 to correct the accounts.

B. Prepare journal entries as necessary to record depreciation expense after the corrections in requirement A have been made.

Solution

WATSON LTD

A.

2003				
June	30	Machinery	5 800	
		Repairs and Maintenance Expense		5 800
		To correct error in cost of machinery.		
	30	Buildings	60 000	
		Land		60 000
		To correct error in recording purchase of land and buildings.		
		Total appraised value (75 000 + 25 000)	= $100 000	
		Cost allocated to building:		
		(75 000 ÷ 100 000) × $80 000	= $60 000	

B.		Depreciation Expense - Machinery [1]	7 470	
		Depreciation Expense - Buildings [2]	2 700	
		Accum. Depr. - Machinery		7 470
		Accum. Depr. - Buildings		2 700
		To record depreciation expense.		
		[1] $48 000 + $5 800 − $4 000	= $49 400	
		$49 800/5 years = $9 960 × 9/12	= $7 470	
		[2] $60 000 − $6 000 = $54 000/20 years	= $2 700	

Problem 20.5 Property and plant records

Selected transactions affecting the Machinery account of Moroni Ltd during the year ended 30 June 2001 follow. The company uses reducing-balance depreciation and calculates depreciation expense to the nearest month.

July	12	Purchased from Raider Ltd a dye machine (Serial No. QST44120) for \$35 000 cash. The estimated life of the machine is 5 years and its estimated residual value is \$4000.
Dec.	31	Purchased from Barker Ltd an automatic loom (Serial No. MJ382100J) for \$36 000 cash. The machine has a useful life of 4 years and a residual value of \$12 600.

Required:

A. Prepare journal entries to record the purchase of the assets and to record depreciation expense on 30 June 2001 and 2002.

B. Open a Machinery account (No. 202) and an Accumulated Depreciation—Machinery account (No. 203), and prepare subsidiary property and plant records for the two assets. Post the journal entries to the general ledger accounts and to the subsidiary records.

Solution

A.

MORONI LTD

2001				
July	12	Machinery	35 000	
		Cash at Bank		35 000
		To record acquisition of dye machine.		
Dec.	31	Machinery	36 000	
		Cash at Bank		36 000
		To record acquisition of drill press.		
June	30	Depreciation Expense - Machinery	16 390	
		Accum. Depr. - Machinery		16 390
		To record depreciation expense.		
		Dye machine = \$35 000 x 35%	\$12 250	
		Loom = \$36 000 x 23% x 6/12	4 140	
		Total	\$16 390	

Note: Dye machine $= 1 - 5\sqrt{\dfrac{4000}{36\,000}}$ = .35 or 35% approx.

Note: Loom $= 1 - 4\sqrt{\dfrac{12\,600}{36\,000}}$ = .23 or 23% approx.

2002				
June	30	Depreciation Expense - Machinery	15 291	
		Accum. Depr. - Machinery		15 291
		To record depreciation expense.		
		Dye machine = \$35 000 − \$12 250 = \$22 750 × 35%		\$7 963
		Loom = \$36 000 − \$4 140 = \$31 860 × 23%		7 328
		Total		\$15 291

(continued)

B.

Account Machinery No. 202

Date		Explanation	Post Ref.	Debit	Credit	Balance
2001						
July	12			35 000		35 000
Dec.	31			36 000		71 000

Account Accumulated Depreciation Machinery No. 203

Date		Explanation	Post Ref.	Debit	Credit	Balance
2001						
June	30			16 390		16 390
2002						
June	30			15 291		31 681

PROPERTY AND PLANT RECORD

Item	Dye Machine	Account No.	202
Serial No.	QST44120	General Ledger Account	Machinery
Purchased from	Beech Ltd		
Useful life	5 years	Residual Value	$4 000
Depn method	Reducing-balance	Rate	35%

Date	Explanation	p/r	Asset			Depreciation		
			Dr	Cr	Bal	Dr	Cr	Bal
12/07/01			35 000		35 000			
30/06/01							12 250	12 250
30/06/02							7 963	20 213

PROPERTY AND PLANT RECORD

Item	Automatic Loom	Account No.	202
Serial No.	MJ382100J	General Ledger Account	Machinery
Purchased from	Park and Sons		
Useful life	4 years	Residual Value	$12 600
Depn method	Reducing-balance	Rate	23%

Date	Explanation	p/r	Asset			Depreciation		
			Dr	Cr	Bal	Dr	Cr	Bal
31/12/00			36 000		36 000			
30/06/01							4 140	4 140
30/06/02							7 328	11 468