

Depreciation

MEANING OF KEY TERMS USED IN THE CHAPTER

1. Depreciation	Depreciation means fall in the value of an asset because of: (i) usage, <i>i.e.</i> , wear and tear; (ii) efflux of time; (iii) obsolescence; or (iv) accident. The term 'Depreciation' is associated with tangible fixed assets.
2. Depletion	The term 'Depletion' is associated with extraction of natural resources like quarries, mines, etc.
3. Amortisation	The term is associated with writing off intangible assets.
4. Obsolescence	It means decline in the economic value of the assets due to innovation or improved technology, change in taste or fashion or inadequacy of existing asset due to improved demand.
5. Original or Historical Cost	It means cost incurred to acquire the asset up to the point it is ready for use. It is the basis for depreciation.
6. Useful Life	Useful life of the asset means the period for which the asset can be used productively by the enterprise.
7. Residual Value	It is the estimated sale value of the asset at the end of its useful economic life.
8. Accumulated Depreciation	It is the total depreciation already charged as expense in different accounting periods. In other words, it is total depreciation provided on a fixed asset till date.
9. Straight Line Method	It is a method of providing depreciation under which net cost of the asset (Historical Cost – Realisable Value) is written off equally over the useful life of the asset.
10. Written Down Value Method	It is a method of providing depreciation under which a percentage of depreciation is applied every year on the book value, <i>i.e.</i> , cost less depreciation till date.

CHAPTER SUMMARY

- **Depreciation** is the cost of fixed asset that has expired because of its usage and/or efflux of time.
- **Causes of Depreciation** are (i) wear and tear, (ii) efflux of time, (iii) obsolescence and (iv) accidents.
- **Objectives of providing depreciation** are to:
 - (i) ascertain correct profit or loss. (ii) show a true and fair view of the financial position.
 - (iii) show the fixed assets at their correct values. (iv) retain funds out of profits for replacement.
 - (v) compliance of legal provisions.
- **Depreciation** can be recorded either (i) by crediting it to the respective Asset Account or (ii) by crediting it to Provision for Depreciation Account or Accumulated Depreciation Account.
- **Depreciation** can be computed either as a (i) fixed percentage on original cost known as **Straight Line Method** or (ii) fixed percentage on diminishing balance known as **Written Down Value Method**.
- **Depreciation** reduces the book value and not the market value of the depreciable fixed asset.

- An addition or extension to an existing asset which is of a capital nature and which becomes an integral part of the existing asset, is depreciated over its estimated useful life.
- Heavy repairs which are of capital nature and which increase the useful life of the assets, are also added to cost of such assets.
- All expenses which are incurred till the asset is ready for use such as freight, installation cost are included in cost of the asset.
- GST (CGST and SGST or IGST) Paid on purchase of asset is not a cost because it is set off against GST Collected. Hence, Asset Account is debited by the net amount, *i.e.*, Gross Value – GST Paid.

Solved Questions

Illustration 1.

A firm, whose accounting year is the Financial year, purchased on 1st July, 2017 machinery costing ₹ 30,000.

It purchased further machinery on 31st December, 2017 costing ₹ 20,000 and on 1st October, 2018 costing ₹ 10,000.

On 1st April, 2019, one-third of the machinery installed on 1st July, 2017 became obsolete and was sold for ₹ 3,000.

Show Machinery Account as it would appear in the books of the firm, it being given that machinery was depreciated by Fixed Instalment Method @ 10% p.a.

What would be the value of Machinery Account on 1st April, 2020?

Solution:

Dr.		MACHINERY ACCOUNT				Cr.
Date	Particulars	₹	Date	Particulars	₹	
2017			2018			
July 1	To Bank A/c (Mach. I)	30,000	March 31	By Depreciation A/c:		
Dec. 31	To Bank A/c (Mach. II)	20,000		Mach. I		
				(₹ 30,000 × 10/100 × 9/12)	2,250	
				Mach. II		
				(₹ 20,000 × 10/100 × 3/12)	500	
			March 31	By Balance c/d:	2,750	
				Mach. I ₹ (30,000 – 2,250)	27,750	
				Mach. II ₹ (20,000 – 500)	19,500	
		50,000			50,000	
2018			2019			
April 1	To Balance b/d:		March 31	By Depreciation A/c:		
	Mach. I	27,750		Mach. I		
	Mach. II	19,500		(₹ 30,000 × 10/100)	3,000	
Oct. 1	To Bank A/c (Mach. III)	10,000		Mach. II		
				(₹ 20,000 × 10/100)	2,000	
				Mach. III		
				(₹ 10,000 × 10/100 × 6/12)	500	
			March 31	By Balance c/d:	5,500	
				Mach. I		
				₹ (27,750 – 3,000)	24,750	
				Mach. II		
				₹ (19,500 – 2,000)	17,500	
				Mach. III		
				₹ (10,000 – 500)	9,500	
		57,250			51,750	
					57,250	

Depreciation

15.3

2019				2019			
April	1	To Balance b/d:		April	1	By Bank A/c (Sale)	3,000
		Mach. I	24,750	April	1	By Loss on Sale of Machine A/c (Note 2)	5,250
		Mach. II	17,500			(Profit and Loss A/c)	
		Mach. III	9,500	2020			
				March	31	By Depreciation A/c:	
						Mach. I	
						[₹ (30,000 – 10,000) × 10/100]	2,000
						Mach. II	
						(₹ 20,000 × 10/100)	2,000
						Mach. III	
						(₹ 10,000 × 10/100)	1,000
							5,000
						By Balance c/d:	
						Mach. I (Note 3)	
						₹ (16,500 – 2,000)	14,500
						Mach. II	
						₹ (17,500 – 2,000)	15,500
						Mach. III	
						₹ (9,500 – 1,000)	8,500
							38,500
			51,750				51,750
2020							
April	1	To Balance b/d	38,500				

Notes:

- Mach. I stands for Machine I and Mach. II stands for Machine II and so on.
- Calculation of Gain (Profit)/Loss on Sale of Machine:

	₹
Cost of Machine (1st July, 2017) (Mach. I; ₹ 30,000 × 1/3)	10,000
Less: Depreciation for 2017–18 (₹ 2,250 × 1/3)	750
Book value as on 1st April, 2018	9,250
Less: Depreciation for 2018–19 (₹ 3,000 × 1/3)	1,000
Book value as on 1st April, 2019	8,250
Less: Sale Proceeds	3,000
Loss on Sale of Machine	5,250
- Book value as on 1st April, 2019 of remaining 2/3 (Mach. I) = ₹ 24,750 × 2/3 = ₹ 16,500.

Illustration 2.

On 1st July, 2018, R.K. Traders purchased an old machine for ₹ 28,000 and paid ₹ 4,600 for its repairs and installation. The machinery started functioning on 1st September, 2018. Another new plant was purchased for ₹ 45,000 and incurred installation charges ₹ 3,000 on 1st January, 2019. On 31st January, 2020, the plant installed on 1st July, 2018 was sold for ₹ 27,400 due to some mechanical problem. Depreciation is charged @ 10% p.a. on Fixed Instalment Basis. Show Machinery Account and Depreciation Account for 2 years ended 31st March, 2020.

Solution:

MACHINERY ACCOUNT					
Dr.			Cr.		
Date	Particulars	₹	Date	Particulars	₹
2018			2019		
July	1 To Bank A/c (Purchase)	28,000	March	31 By Depreciation A/c (Note 1)	3,102
	To Bank A/c (Installation)	4,600		By Balance c/d	77,498
2019					
Jan.	1 To Bank A/c (Purchase)	45,000			
	To Bank A/c (Installation)	3,000			
		80,600			80,600
2019			2020		
April	1 To Balance b/d	77,498	Jan.	31 By Bank A/c (Sale)	27,400
				By Loss on Sale of Machine A/c (Note 3)	581
				(Profit and Loss A/c)	
			March	31 By Depreciation A/c (Note 2)	7,517
				By Balance c/d	42,000
		77,498			77,498

Dr.		DEPRECIATION ACCOUNT				Cr.
Date	Particulars	₹	Date	Particulars	₹	
2019			2019			
March 31	To Machinery A/c	3,102	March 31	By Profit and Loss A/c	3,102	
2020			2020			
March 31	To Machinery A/c	7,517	March 31	By Profit and Loss A/c	7,517	

Notes:

1. Calculation of Depreciation for the year ended 31st March, 2019:	₹
Depreciation on ₹ 32,600 for 7 months @ 10%	1,902
Depreciation on ₹ 48,000 for 3 months @ 10%	1,200
	<u>3,102</u>
2. Calculation of Depreciation for the year ended 31st March, 2020:	
Depreciation on ₹ 48,000 for full year @ 10%	4,800
Depreciation on ₹ 32,600 for 10 months @ 10%	2,717
	<u>7,517</u>
3. Calculation of gain (profit)/loss on Sale of Machine:	
Value of the machine on 1st July, 2018	32,600
Less: Depreciation for 7 months @ 10%	1,902
Book Value on 1st April, 2019	30,698
Less: Depreciation for 10 months @ 10%	2,717
Book Value of the machine on the date of sale	27,981
Less: Sale Proceeds	27,400
Loss on Sale of Machine	<u>581</u>

Illustration 3.

You are given the following balances as on 1st April, 2019:

Machinery A/c	₹ 5,00,000
Provision for Depreciation A/c	₹ 1,16,000

Depreciation is charged on machinery @ 20% p.a. by the Diminishing Balance Method. A piece of machinery purchased on 1st April, 2017 for ₹ 1,00,000 was sold on 1st October, 2019 for ₹ 60,000. Prepare Machinery Account and Provision for Depreciation Account for the year ended 31st March, 2020.

Solution:

Dr.		MACHINERY ACCOUNT				Cr.
Date	Particulars	₹	Date	Particulars	₹	
2019			2019			
April 1	To Balance b/d	5,00,000	Oct. 1	By Provision for Depreciation A/c	42,400	
April 1	To Gain (Profit) on Sale of Machine A/c (Profit and Loss A/c)	2,400	Oct. 1	By Bank A/c	60,000	
			2020			
			March 31	By Balance c/d	4,00,000	
		5,02,400			5,02,400	
2020						
April 1	To Balance b/d	4,00,000				

Dr.		PROVISION FOR DEPRECIATION ACCOUNT				Cr.
Date	Particulars	₹	Date	Particulars	₹	
2019			2019			
Oct. 1	To Machinery A/c (WN 1)	42,400	April 1	By Balance b/d	1,16,000	
2020			Oct. 1	By Depreciation A/c (WN 1)	6,400	
March 31	To Balance c/d	1,44,000	2020			
		1,86,400	March 31	By Depreciation A/c (WN 2)	64,000	
					1,86,400	
			2020			
			April 1	By Balance b/d	1,44,000	

Working Notes:

1. Depreciation provided on Machinery sold till 1st October, 2019:

	₹
For 2017-18	20,000
For 2018-19 (₹ 1,00,000 – ₹ 20,000) × $\frac{20}{100}$	16,000
For 2019-20 (₹ 1,00,000 – ₹ 20,000 – ₹ 16,000) × $\frac{20}{100} \times \frac{6}{12}$	6,400
	<u>42,400</u>

2. Calculation of Depreciation provided for 2019-20:

Balance of Provision for Depreciation on 1st April, 2019	1,16,000
Add: Depreciation provided on Machinery sold	6,400
	<u>1,22,400</u>
Less: Accumulated Depreciation on Machinery sold (WN 1)	42,400
Depreciation on the remaining Machinery	<u>80,000</u>
Cost of remaining Machinery (₹ 5,00,000 – ₹ 1,00,000)	4,00,000
Less: Depreciation on remaining Machinery (As above)	80,000
	<u>3,20,000</u>
Depreciation provided during 2019-20 = ₹ 3,20,000 × 20/100 = ₹ 64,000.	

Illustration 4.

On 1st April, 2016, X Ltd. purchased from Y Ltd. a plant costing ₹ 4,00,000 on instalment basis payable as follows:

	₹
On 1st April, 2016	1,00,000
On 1st October, 2016	1,00,000
On 1st April, 2017	1,00,000
On 1st April, 2018	1,00,000

The company spent ₹ 10,000 on transportation and installation of the plant. It was decided to provide for depreciation by Straight Line Method. Useful life of the plant was estimated at 5 years. It was also estimated that at the end of the useful life, realisable value of the plant would be ₹ 12,000 (gross) and dismantling cost of plant, to be paid by company was estimated at ₹ 2,000. The plant was destroyed by fire on 31st March, 2020 and an insurance claim of ₹ 50,000 was admitted by the insurance company.

Prepare Plant Account and Provision for Depreciation Account if the company closes its books on 31st March every year.

Solution:

$$\begin{aligned} \text{Annual Depreciation} &= \frac{\text{Total Cost of Asset} - \text{Scrap Value}}{\text{Estimated Useful Life of Plant (in years)}} \\ &= \frac{\text{₹ } 4,00,000 + \text{₹ } 10,000 - (\text{₹ } 12,000 - \text{₹ } 2,000)}{5} \\ &= \frac{\text{₹ } 4,00,000}{5} = \text{₹ } 80,000 \text{ per year.} \end{aligned}$$

Dr.		PLANT ACCOUNT				Cr.
Date	Particulars	₹	Date	Particulars	₹	
2016 April 1	To Bank A/c (Cost) 1,00,000 To Bank A/c (Expenses) 10,000 To Supplier 3,00,000	4,10,000	2017 March 31	By Balance c/d	4,10,000	
		4,10,000			4,10,000	
2017 April 1	To Balance b/d	4,10,000	2018 March 31	By Balance c/d	4,10,000	
		4,10,000			4,10,000	
2018 April 1	To Balance b/d	4,10,000	2019 March 31	By Balance c/d	4,10,000	
		4,10,000			4,10,000	
2019 April 1	To Balance b/d	4,10,000	2020 March 31	By Provision for Depreciation A/c	3,20,000	
		4,10,000	March 31	By Bank A/c (Insurance Claim)	50,000	
		4,10,000	March 31	By Loss by Fire A/c (Bal. Fig.) (Profit and Loss A/c)	40,000	
		4,10,000			4,10,000	

Dr.		PROVISION FOR DEPRECIATION ACCOUNT				Cr.
Date	Particulars	₹	Date	Particulars	₹	
2017 March 31	To Balance c/d	80,000	2017 March 31	By Depreciation A/c	80,000	
		80,000			80,000	
2018 March 31	To Balance c/d	1,60,000	2017 April 1	By Balance b/d	80,000	
		1,60,000	2018 March 31	By Depreciation A/c	80,000	
		1,60,000			1,60,000	
2019 March 31	To Balance c/d	2,40,000	2018 April 1	By Balance b/d	1,60,000	
		2,40,000	2019 March 31	By Depreciation A/c	80,000	
		2,40,000			2,40,000	
2020 March 31	To Plant A/c (Transfer)	3,20,000	2019 April 1	By Balance b/d	2,40,000	
		3,20,000	2020 March 31	By Depreciation A/c	80,000	
		3,20,000			3,20,000	

Illustration 5.

M Ltd., which depreciates its machinery at 10% p.a. according to Diminishing Balance Method, had balance on 1st April, 2019 of ₹ 9,82,000 (cost) in its Machinery Account and balance of ₹ 2,76,000 in Provision for Depreciation Account.

On 1st September, 2019, a new machine was purchased at ₹ 3,20,000 and paid ₹ 30,000 for its carriage and installation. The machine started functioning from 1st September, 2019.

On 1st October, 2019, an old machinery was sold at ₹ 2,15,000 which was installed on 1st July, 2017 costing ₹ 3,88,000.

Show Machinery Account and Provision for Depreciation Account for the year ended 31st March, 2020.

Solution:

Dr.		MACHINERY ACCOUNT				Cr.
Date	Particulars	₹	Date	Particulars	₹	
2019			2019			
April 1	To Balance <i>b/d</i> (cost)	9,82,000	Oct. 1	By Provision for Depreciation A/c	81,140	
Sept. 1	To Bank A/c—Purchase	3,20,000	Oct. 1	By Bank A/c—Sale	2,15,000	
	To Cash A/c—Carriage and Installation	30,000	Oct. 1	By Loss on Sale of Machine A/c (WN 1) (Profit and Loss A/c)	91,860	
			2020			
			March 31	By Balance <i>c/d</i>	9,44,000	
		13,32,000			13,32,000	
2020						
April 1	To Balance <i>b/d</i>	9,44,000				

Dr.		PROVISION FOR DEPRECIATION ACCOUNT				Cr.
Date	Particulars	₹	Date	Particulars	₹	
2019			2019			
Oct. 1	To Machinery (WN 2)	81,140	April 1	By Balance <i>b/d</i>	2,76,000	
2020			Oct. 1	By Depreciation A/c	16,150	
March 31	To Balance <i>c/d</i>	2,69,726	2020			
			March 31	By Depreciation A/c (WN 3)	58,716	
		3,50,866			3,50,866	
			2020			
			April 1	By Balance <i>b/d</i>	2,69,726	

Working Notes:

1. Calculation of Gain (Profit)/Loss on Sale of Machinery on 1st October, 2019:	₹
Value of sold Machine on 1st July, 2017	3,88,000
Less: Depreciation for 9 months @ 10% p.a.	29,100
Value on 1st April, 2018	<u>3,58,900</u>
Less: Depreciation for full year @ 10% p.a.	35,890
Value on 1st April, 2019	<u>3,23,010</u>
Less: Depreciation for 6 months @ 10% p.a.	16,150
Value on 1st October, 2019	<u>3,06,860</u>
Less: Sale proceeds	2,15,000
Loss on sale of machinery	<u><u>91,860</u></u>
2. Total depreciation charged on the machine sold = ₹ (29,100 + 35,890 + 16,150) = ₹ 81,140.	
3. Calculation of depreciation on remaining machinery:	
Value of machinery on 1st April, 2019 (cost)	9,82,000
Less: Cost of machine sold	3,88,000
Value of machinery (remaining) on 1st April, 2020 (at cost)	<u>5,94,000</u>
Provision for Depreciation Account balance on 1st April, 2020	<u>2,76,000</u>
Less: Total depreciation of the machine sold up to 1st April, 2019 (₹ 29,100 + ₹ 35,890)	64,990
Total depreciation of the remaining machinery up to 1st April, 2019	<u>2,11,010</u>
Value of remaining machinery (at cost) on 1st April, 2019	5,94,000
Less: Total Depreciation up to 1st April, 2019 charged	2,11,010
Written down value on 1st April, 2019	<u>3,82,990</u>
Depreciation on ₹ 3,82,990 for full year @ 10% p.a.	38,299
Depreciation on ₹ 3,50,000 for 7 months @ 10% p.a.	20,417
Total depreciation	<u><u>58,716</u></u>

Illustration 6.

On 1st April, 2019, the Machinery Account and Provision for Depreciation Account of Mr. Akash Agarwal shows a balance of ₹ 94,000 and ₹ 37,400 respectively. On 31st July, 2019, a machine costing ₹ 56,000 was purchased and paid for its freight and installation ₹ 12,000. On 31st December, 2019, an old machine was sold at ₹ 23,600, which was installed on 1st September, 2017, at a cost of ₹ 45,000.

Depreciation is charged @ 10% p.a. by the Diminishing Balance Method. Show the Machinery Account, Provision for Depreciation Account and Depreciation Account for the year ended 31st March, 2020. Also, show position of the Machinery Account in the Balance Sheet.

Solution:

Dr.		MACHINERY ACCOUNT				Cr.
Date	Particulars	₹	Date	Particulars	₹	
2019			2019			
April 1	To Balance <i>b/d</i>	94,000	Dec. 31	By Provision for Depreciation A/c	9,722	
July 31	To Bank A/c	56,000	Dec. 31	By Bank A/c (Sale Proceeds)	23,600	
	To Cash A/c	12,000	Dec. 31	By Loss on Sale of Machine A/c (WN 1)	11,678	
	(Freight and Installation)			(Profit and Loss A/c)		
			2020			
			March 31	By Balance <i>c/d</i>	1,17,000	
		1,62,000			1,62,000	

Dr.		DEPRECIATION ACCOUNT				Cr.
Date	Particulars	₹	Date	Particulars	₹	
2019			2020			
Dec. 31	To Provision for Depreciation A/c	2,860	March 31	By Profit and Loss A/c	9,239	
2020				—transferred		
March 31	To Provision for Depreciation A/c	6,379				
		9,239			9,239	

Dr.		PROVISION FOR DEPRECIATION ACCOUNT				Cr.
Date	Particulars	₹	Date	Particulars	₹	
2019			2019			
Dec. 31	To Machinery A/c (WN 3)	9,722	April 1	By Balance <i>b/d</i>	37,400	
2020			Dec. 31	By Depreciation A/c	2,860	
March 31	To Balance <i>c/d</i>	36,917	2020			
		46,639	March 31	By Depreciation A/c (WN 2)	6,379	
					46,639	

BALANCE SHEET
as at 31st March, 2020

Liabilities	₹	Assets	₹
		Machinery	1,17,000
		Less: Provision for Depreciation	36,917
			80,083

Working Notes:

1. Calculation of gain (profit) or loss on Sale of Machinery on 31st December, 2019:		₹
1st September, 2017	Purchased	45,000
31st March, 2018	Less: Depreciation @ 10% p.a. for 7 months	<u>2,625</u>
1st April, 2018	Book Value	42,375
31st March, 2019	Less: Depreciation @ 10% p.a.	<u>4,237</u>
1st April, 2019	Book Value	38,138
31st December, 2019	Less: Depreciation @ 10% p.a. for 9 months	<u>2,860</u>
	Value on the date of sale	35,278
	Less: Sale Proceeds	<u>23,600</u>
	Loss on sale of machinery	<u>11,678</u>
2. Calculation of depreciation on the remaining machinery:		
	Written down value of Machinery on 1st April, 2019 (₹ 94,000 – ₹ 37,400)	56,600
	Less: Book value (on 1st April, 2019) of the machine sold (as per WN 1)	<u>38,138</u>
	Book value of the remaining old machinery	<u>18,462</u>
	Depreciation on the remaining old machinery of ₹ 18,462 @ 10% p.a.	1,846
	Depreciation on the machine purchased for ₹ 68,000 on 31st July, 2019 @ 10% p.a. for 8 months	<u>4,533</u>
		<u>6,379</u>
3. Accumulated depreciation balance of the machine sold transferred from Provision for Depreciation Account to Machinery Account (₹ 2,625 + ₹ 4,237 + ₹ 2,860 = ₹ 9,722).		

Illustration 7.

A Co. charged depreciation @ 20% p.a. on written down value. Machinery costing ₹ 1,00,000, ₹ 40,000 and ₹ 30,000 were purchased on 1st April, 2016, 1st October, 2017 and 1st January, 2019 respectively. On 1st January, 2020, machinery purchased on 1st October, 2017 was damaged and replaced by a new machine costing ₹ 50,000. The damaged machinery was insured and an insurance claim of ₹ 24,800 (after adjustment of value of scrap) was admitted by the Insurance Co. The scrap was sold for ₹ 2,200.

Show Machinery Account and Accumulated Depreciation Account for the year ended 31st March, 2020.

Solution:

MACHINERY ACCOUNT					
Dr.			Cr.		
Date	Particulars	₹	Date	Particulars	₹
2019			2020		
April 1	To Balance b/d (₹ 1,00,000 + ₹ 40,000 + ₹ 30,000)	1,70,000	Jan. 1	By Accumulated Depreciation A/c	15,520
			Jan. 1	By Cash A/c	2,200
			Jan. 1	By Insurance Co.	24,800
2020			March 31	By Balance c/d	1,80,000
Jan. 1	To Gain (Profit) on Sale of Machine A/c (Profit and Loss A/c)	2,520			
Jan. 1	To Cash A/c	50,000			
		<u>2,22,520</u>			<u>2,22,520</u>

Dr.		ACCUMULATED DEPRECIATION ACCOUNT				Cr.
Date	Particulars	₹	Date	Particulars	₹	
2020			2019			
Jan. 1	To Machinery A/c (WN 1 and 3)	15,520	April 1	By Balance b/d (WN 1 and 2)	61,500	
March 31	To Balance c/d	68,740	2020			
			Jan. 1	By Depreciation A/c	4,320	
			March 31	By Depreciation A/c (₹ 10,240 + ₹ 5,700 + ₹ 2,500)	18,440	
		84,260			84,260	

Working Notes:

1. CALCULATION OF DEPRECIATION ON MACHINERY

Date of Purchase	1st April, 2016 (₹)	1st October, 2017 (₹)	1st January, 2019 (₹)	1st January, 2020 (₹)
Cost of Machinery	1,00,000	40,000	30,000	50,000
Depreciation for 2016–17	20,000	...	...	...
WDV on 1st April, 2017	80,000	...	...	...
Depreciation for 2017–18	16,000	4,000	...	...
WDV on 1st April, 2018	64,000	36,000	...	...
Depreciation for 2018–19	12,800	7,200	1,500 (3 months)	...
WDV on 1st April, 2019	51,200	28,800	28,500	...
Depreciation for 2019–20	10,240	4,320 (9 months)	5,700	2,500 (3 months)

2. Balance of Accumulated Depreciation Account on 1st April, 2019

$$= (\text{₹ } 20,000 + \text{₹ } 16,000 + \text{₹ } 12,800) + (\text{₹ } 4,000 + \text{₹ } 7,200) + \text{₹ } 1,500 = \text{₹ } 61,500.$$

3. Accumulated Depreciation on Machinery Sold = ₹ 4,000 + ₹ 7,200 + ₹ 4,320 = ₹ 15,520.

Illustration 8.

A firm writes off 95% of the cost of the machines over 10 years following Straight Line Method, leaving the rest 5% as estimated scrap value. Full depreciation is provided even if an asset is used only for part of the year.

On 31st December, 2018, the original cost of the machines in possession were:

(i) Machines purchased in 2007 or earlier	₹ 2,40,000
(ii) Machines purchased in 2010	₹ 80,000
(iii) Machines purchased in 2014	₹ 60,000

On 30th June, 2019, a machine purchased in 2007 for ₹ 20,000 was sold for ₹ 1,800. On 30th November 2019, a machine purchased in 2014 for ₹ 30,000 was sold for ₹ 10,000 and on the same date a new machine was purchased for ₹ 90,000.

Show the Machinery Account and Provision for Depreciation Account for the year ending 31st December, 2019.

Solution:

Dr. MACHINERY ACCOUNT Cr.					
Date	Particulars	₹	Date	Particulars	₹
2019			2019		
Jan. 1	To Balance <i>b/d</i> (₹ 2,40,000 + ₹ 80,000 + ₹ 60,000)	3,80,000	June 30	By Provision for Depreciation A/c	19,000
June 30	To Gain on Sale of Machinery A/c (Profit and Loss A/c)	800	June 30	By Bank A/c (Sale)	1,800
Nov. 30	To Bank A/c	90,000	Nov. 30	By Provision for Depreciation A/c	17,100
			Nov. 30	By Bank A/c (Sale)	10,000
			Nov. 30	By Loss on Sale of Machine A/c	2,900
			Dec. 31	By Balance <i>c/d</i>	4,20,000
		4,70,800			4,70,800

Dr. PROVISION FOR DEPRECIATION ACCOUNT Cr.					
Date	Particulars	₹	Date	Particulars	₹
2019			2019		
June 30	To Machinery A/c (₹ 20,000 × 95/100)	19,000	Jan. 1	By Balance <i>b/d</i> (₹ 2,28,000 + ₹ 68,400 + ₹ 28,500)	3,24,900
Nov. 30	To Machinery A/c (₹ 14,250 + ₹ 2,850)	17,100	Nov. 30	By Depreciation A/c (Mach. III)	2,850
Dec. 31	To Balance <i>c/d</i>	3,10,650	Dec. 31	By Depreciation A/c (WN 4):	
				Mach. I	7,600
				Mach. III	2,850
				Mach. IV	8,550
					19,000
		3,46,750			3,46,750

Working Notes:

1. Depreciation Balance on 1st January, 2019	₹
(a) Machinery Purchased in 2007 or before 95% of ₹ 2,40,000	2,28,000
(b) Machinery Purchased in 2010	
Depreciation for 9 Years = $\frac{95}{100} \times ₹ 80,000 \times \frac{9}{10}$	68,400
(c) Machinery Purchased in 2014	
Depreciation for 5 years = $\frac{95}{100} \times ₹ 60,000 \times \frac{5}{10}$	28,500
2. Depreciation on Machinery Sold on 30th June, 2019	₹
Original Value	20,000
Depreciation = $\frac{95}{100} \times ₹ 20,000$	19,000
3. Depreciation on Machinery Sold on 30th November, 2019	₹
Original Value	30,000
Total Depreciation for 10 years = $\frac{95}{100} \times ₹ 30,000$	28,500
Depreciation Charged up to 2018 for 5 Years = $\frac{5}{10} \times ₹ 28,500$	14,250
Depreciation for 2019 = $\frac{1}{10} \times ₹ 28,500$	2,850
Depreciation on machinery sold on 30th November, 2019 (₹ 14,250 + ₹ 2,850)	<u>17,100</u>

4. Depreciation for 2019

On Machine II	(₹ 80,000 × 95/100 × 1/10)	7,600
On Machine III	(₹ 30,000 × 95/100 × 1/10)	2,850
On Machine IV	(₹ 90,000 × 95/100 × 1/10)	8,550
		<u>19,000</u>

Advanced Level Questions

Illustration 9.

Hopefull Ltd. write off depreciation @ 10% per annum on the diminishing balance. On 1st April, 2016, the Machinery Account showed a balance of ₹ 2,98,000. It was discovered in the year 2016–17 that:

- Heavy repairs affected to Plant and Machinery (completed on 30th September, 2014) were debited to Machinery Account. The amount was ₹ 30,000; and
- A machine costing ₹ 12,000 was entered in the Purchases Book on 1st January, 2015. The expenses on installation, ₹ 800, were debited to General Expenses Account.

Necessary corrections were made in the year 2016–17. On 30th September, 2016 a machine which had costed ₹ 40,000 on 1st April, 2014 was sold for ₹ 29,000 and a new machine costing ₹ 58,000 was purchased on the same date, the expenses on installing the machine were ₹ 3,000.

Show the Machinery Account for the year ended 31st March, 2017.

Solution:

Dr.		MACHINERY ACCOUNT		Cr.	
Date	Particulars	₹	Date	Particulars	₹
2016 April 1	To Balance b/d	2,98,000	2016 April 1	By Profit and Loss A/c (Repairs) (WN 1)	25,650
	To Gain (Profit) on Sale of Machine A/c (For machine purchased on 1st Jan. 2015) (WN 2)	11,232	Sept. 30	By Bank A/c (Sale)	29,000
Sept. 30	To Bank A/c (₹ 58,000 + ₹ 3,000)	61,000		By Depreciation A/c (WN 3) (for 6 months)	1,620
				By Loss on Sale of Machine A/c (WN 3)	1,780
			2017 March 31	By Depreciation A/c (WN 5)	28,168
			March 31	By Balance c/d	2,84,014
		<u>3,70,232</u>			<u>3,70,232</u>

Working Notes:

- Calculation of Book Value of Heavy Repairs:**

Machinery Account wrongly debited for repairs on 30th September, 2014	₹ 30,000
Less: Depreciation for 2014–15 (₹ 30,000 × 10/100 × 6/12)	1,500
Book Value as on 1st April, 2015	<u>28,500</u>
Less: Depreciation for 2015–16 (₹ 28,500 × 10/100)	2,850
Book Value as on 1st April, 2016	<u>25,650</u>

Amount credited to Machinery A/c and debited to Profit and Loss A/c
- Calculation of Book Value of New Machine wrongly entered in the Purchases and Installation Expenses debited to General Expenses Account:**

Machinery purchased on 1st January, 2015 (₹ 12,000 + ₹ 800)	₹ 12,800
Less: Depreciation for 3 months (2014–15) (₹ 12,800 × 10/100 × 3/12)	320
Book Value as on 1st April, 2015	<u>12,480</u>
Less: Depreciation for 2015–16 (₹ 12,480 × 10/100)	1,248
Book Value as on 1st April, 2016	<u>11,232</u>

Amount debited to Machinery A/c and credited to Profit and Loss A/c

3. Calculation of Profit/Loss on Sale of Machine:	₹
Cost on 1st April, 2014	40,000
Less: Depreciation for 2014–15	4,000
Book Value on 1st April, 2015	<u>36,000</u>
Less: Depreciation for 2015–16	3,600
Book Value on 1st April, 2016	<u>32,400</u>
Less: Depreciation for 2016–17 for 6 months	1,620
Book Value as on 30th September, 2016	<u>30,780</u>
Less: Sale Price	29,000
Loss on Sale of Machine	<u><u>1,780</u></u>
4. Calculation of Book Value of Machinery (other than scrapped) (After Rectification of Errors) As on 1st April 2016:	₹
Unadjusted Book Value as on 1st April, 2016	2,98,000
Add: Book Value of machine purchased on 1st January, 2015 (WN 2)	11,232
	<u>3,09,232</u>
Less: Book Value of repairs wrongly debited to Machinery A/c (WN 1)	25,650
	<u>2,83,582</u>
Less: Book Value of Machine Sold (WN 3)	32,400
	<u><u>2,51,182</u></u>
5. Calculation of Depreciation for 2016–17:	₹
A. On Old Machine (10% on ₹ 2,51,182) (WN 4)	25,118
B. On New Machine (₹ 61,000 × 10/100 × 6/12)	3,050
	<u>28,168</u>

Illustration 10.

Gupta & Co. closes its accounts on 31st March, every year. It purchased the machineries as follows:

- (i) Purchased machinery costing ₹ 1,20,000 on 1st July, 2014.
- (ii) On 1st October, 2014, some machines purchased costing ₹ 1,20,000.
- (iii) On 1st October, 2015, again purchased some machinery costing ₹ 20,000.
- (iv) On 1st January, 2017, purchased a new machine for ₹ 60,000.
- (v) A machine costing ₹ 40,000 which was purchased on 1st July, 2014 was sold for ₹ 12,000 on 1st April, 2016.
- (vi) It charges depreciation @ $33\frac{1}{3}\%$ on the *Written Down Value Method*.
- (vii) It is the practice to charge depreciation for the full year even if the machinery is used for a part of the year.

Prepare the Machinery Account in the books of Gupta & Co. for three years ending 31st March, 2017.

Solution:

Dr.			MACHINERY ACCOUNT			Cr.		
Date	Particulars	₹	Date	Particulars	₹	Date	Particulars	₹
2014			2015					
July 1	To Bank A/c	1,20,000	March 31	By Depreciation A/c ($33\frac{1}{3}\%$ of ₹ 2,40,000)	80,000			
Oct. 1	To Bank A/c	1,20,000	March 31	By Balance c/d	1,60,000			
		<u>2,40,000</u>			<u>2,40,000</u>			
2015			2016					
April 1	To Balance b/d	1,60,000	March 31	By Depreciation A/c ($33\frac{1}{3}\%$ of ₹ 1,80,000)	60,000			
Oct. 1	To Bank A/c	20,000	March 31	By Balance c/d	1,20,000			
		<u>1,80,000</u>			<u>1,80,000</u>			
2016			2016					
April 1	To Balance b/d	1,20,000	April 1	By Bank A/c (Sale)	12,000			
				By Loss on Sale of Machine A/c (WN 1)	5,778			
2017			2017					
Jan. 1	To Bank A/c	60,000	March 31	By Depreciation A/c (WN 2)	54,074			
		<u>1,80,000</u>		By Balance c/d	1,08,148			
					<u>1,80,000</u>			

Working Notes:

1. Calculation of Loss on Sale of Machinery:

Cost of Machinery on 1st July, 2014	₹	40,000
Less: Depreciation for 2014–15		13,333
Book Value on 1st April, 2015		<u>26,667</u>
Less: Depreciation for 2015–16		8,889
Book Value on 1st April, 2016		<u>17,778</u>
Less: Amount realised on Sale		12,000
Loss on Sale of Machinery		<u>5,778</u>

2. Depreciation for 2016–17:

$$33\frac{1}{3}\% \text{ on } ₹ 1,62,222 \text{ (i.e., } ₹ 1,20,000 + ₹ 60,000 - ₹ 17,778) = ₹ 54,074.$$

Illustration 11.

A company charges depreciation on Plant and Machinery under *Written Down Value Method* @ 15% per annum. On 1st April, 2013 the balance in ledger stood at ₹ 4,60,000. Following particulars are given relating to Plant and Machinery during the four years ended on 31st March, 2017:

- 1st September, 2013 : A machine purchased for ₹ 20,000 (installation expenses ₹ 1,000) on 1st May, 2011 was fully destroyed in an accident.
- 1st July, 2014 : Purchased a new machine costing ₹ 50,000 (installation expenses ₹ 2,500). A sum of ₹ 30,000 was paid on the same date and the balance was paid in May, 2015.
- 31st August, 2015 : Plant purchased on 1st April, 2012 for ₹ 30,000 (installation expenses ₹ 1,500) was disposed off for ₹ 36,000.
- 1st November, 2016 : Some old machineries (Book Value on 1st April, 2013—₹ 10,000) were sold for ₹ 4,000.

Show Plant and Machinery Account as it would appear in the books of the company for the four years ended 31st March, 2017 assuming depreciation is charged even if the asset is sold or destroyed.

Solution:

Dr.			MACHINERY ACCOUNT			Cr.		
Date	Particulars	₹	Date	Particulars	₹			
2013			2013					
April 1	To Balance <i>b/d</i>	4,60,000	Sept. 1	By Depreciation A/c (WN 1)	962			
				By Loss on Accident of Machine A/c (WN 1)	14,434			
			2014					
			March 31	By Depreciation A/c (WN 1) [15% on ₹ 4,44,604 (i.e., ₹ 4,60,000 – ₹ 15,396)]	66,691			
			March 31	By Balance <i>c/d</i>	3,77,913			
		<u>4,60,000</u>			<u>4,60,000</u>			
2014			2015					
April 1	To Balance <i>b/d</i>	3,77,913	March 31	By Depreciation A/c: (₹ 3,77,913 × 15/100)	56,687			
July 1	To Bank A/c (₹ 30,000 + ₹ 2,500)	32,500		(₹ 52,500 × 15/100 × 9/12)	5,906			
	To Creditors for Machine A/c (₹ 50,000 – ₹ 30,000)	20,000	March 31	By Balance <i>c/d</i>	3,67,820			
		<u>4,30,413</u>			<u>4,30,413</u>			
2015			2015					
April 1	To Balance <i>b/d</i>	3,67,820	Aug. 31	By Bank A/c (Sale)	36,000			
Aug. 31	To Gain (Profit) on Sale of Machine A/c (WN 2)	17,864		By Depreciation A/c (WN 2)	1,209			
		<u>3,85,684</u>	2016					
			March 31	By Depreciation A/c [15% on ₹ 3,48,475 (i.e., ₹ 3,67,820 – ₹ 19,345)]	52,271			
			March 31	By Balance <i>b/d</i>	2,96,204			
		<u>2,96,204</u>			<u>3,85,684</u>			
2016			2016					
April 1	To Balance <i>b/d</i>	2,96,204	Nov. 1	By Bank A/c (Sale)	4,000			
				By Depreciation A/c (WN 3)	537			
				By Loss on Sale of Machine A/c (WN 3)	1,604			
			2017					
			March 31	By Depreciation A/c [15% on ₹ 2,90,063 (i.e., ₹ 2,96,204 – ₹ 6,141)] (WN 3)	43,509			
			March 31	By Balance <i>c/d</i>	2,46,554			
		<u>2,96,204</u>			<u>2,96,204</u>			

Working Notes:

1. Calculation of Loss on Accident:	₹
Cost on 1st May, 2011 (₹ 20,000 + ₹ 1,000)	21,000
Less: Depreciation for 11 months (₹ 21,000 × 15/100 × 11/12)	2,887
Book Value on 1st April, 2012	18,113
Less: Depreciation for 2012–13	2,717
Book Value on 1st April, 2013	15,396
Less: Depreciation for 5 months (₹ 15,396 × 15/100 × 5/12)	962
Loss on Accident	<u>14,434</u>

Depreciation**15.17**

2. Calculation of Profit on Sale of Machinery on 31st August, 2015:	₹
Cost on 1st April, 2012 (₹ 30,000 + ₹ 1,500)	31,500
Less: Depreciation for 2012–13	4,725
Book Value on 1st April, 2013	<u>26,775</u>
Less: Depreciation for 2013–14	4,016
Book Value on 1st April, 2014	<u>22,759</u>
Less: Depreciation for 2014–15	3,414
Book Value on 1st April, 2015	<u>19,345</u>
Less: Depreciation for 5 Months (₹ 19,345 × 5/12 × 15/100)	1,209
Book Value on 31st August, 2015	<u>18,136</u>
Less: Amount realised on sale	36,000
Gain (Profit) on Sale of Machinery	<u><u>17,864</u></u>
3. Calculation of Loss on Sale of Machinery on 1st November, 2016:	₹
Book Value on 1st April, 2013	10,000
Less: Depreciation for 2013–14	1,500
Book Value on 1st April, 2014	<u>8,500</u>
Less: Depreciation for 2014–15	1,275
Book Value on 1st April, 2015	<u>7,225</u>
Less: Depreciation for 2015–16	1,084
Book Value on 1st April, 2016	<u>6,141</u>
Less: Depreciation for 7 months (₹ 6,141 × 7/12 × 15/100)	537
Book Value on 1st November, 2016	<u>5,604</u>
Less: Amount realised on Sale	4,000
Loss on Sale of Machinery	<u><u>1,604</u></u>

Illustration 12.

A firm imported a machine on 1st October, 2016 for ₹ 2,00,000, paid custom duty and freight ₹ 40,000 and incurred erection charges ₹ 60,000. Another machinery costing ₹ 1,00,000 was purchased from the local market on 1st April, 2017. On 1st October, 2018, one-third of the imported machinery got out of order and was sold for ₹ 40,000. Another machinery was purchased to replace the same for ₹ 50,000 on the same date. Depreciation is to be charged at 20% per annum on the cost following Straight Line Method.

Accounts are closed each year on 31st March. You are required to show:

- (i) Machinery Account for 2016–17, 2017–18 and 2018–19.
- (ii) Machinery Account and Provision for Depreciation Account for 2016–17, 2017–18 and 2018–19.

Solution: (i) When only Machinery Account is prepared:

MACHINERY ACCOUNT					
Dr.			Cr.		
Date	Particulars	₹	Date	Particulars	₹
2016			2017		
Oct. 1	To Bank A/c (Purchase Price) (M1)	2,00,000	March 31	By Depreciation A/c	30,000
Oct. 1	To Bank A/c (Freight) (M1)	40,000		(₹ 3,00,000 × 20/100 × 6/12)	
Oct. 1	To Bank A/c (Erection Charges) (M1)	60,000	March 31	By Balance c/d	2,70,000
		<u>3,00,000</u>			<u>3,00,000</u>

Dr.			PROVISION FOR DEPRECIATION ACCOUNT			Cr.		
Date	Particulars	₹	Date	Particulars	₹			
2017			2017					
March 31	To Balance <i>c/d</i>	30,000	March 31	By Depreciation A/c (M1)	30,000			
2018			2017					
March 31	To Balance <i>c/d</i> :		April 1	By Balance <i>b/d</i>	30,000			
	M1	90,000	2018					
	M2	20,000	March 31	By Depreciation A/c:				
		1,10,000		M1	60,000			
				M2	20,000	80,000		
						1,10,000		
			2018					
2018			April 1	By Balance <i>b/d</i>	1,10,000			
Oct. 1	To Machinery A/c	40,000	Oct. 1	By Depreciation A/c	10,000			
	[(₹ 90,000 × 1/3) + (₹ 10,000)]		2019					
2019			March 31	By Depreciation A/c:				
March 31	To Balance <i>c/d</i> :			M1	40,000			
	M1	1,00,000		M2	20,000			
	M2	40,000		M3	5,000	65,000		
	M3	5,000				1,85,000		
		1,45,000						
		1,85,000	2019					
			April 1	By Balance <i>b/d</i>	1,45,000			

Unsolved Questions

- An asset was purchased for ₹ 10,500 on 1st April, 2013. The scrap value was estimated to be ₹ 500 at the end of its estimated useful life of 10 years. Straight Line Method of depreciation was used. The accounting year ends on 31st March every year. The asset was sold for ₹ 600 on 31st March, 2020. Calculate:
 - the depreciation expense for the year ended 31st March, 2014.
 - the net book value of the asset on 31st March, 2018.
 - the gain or loss on sale of the asset on 31st March, 2020.
- X Ltd. imported a machine on 1st October, 2017 for ₹ 2,00,000, paid customs duty and freight ₹ 60,000 and incurred erection charges of ₹ 40,000. Another local machinery costing ₹ 1,00,000 was purchased on 1st April, 2018. On 1st October, 2019, one-third of the imported machine got out of order and was sold for ₹ 40,000. Another machine was purchased to replace the same for ₹ 50,000 on the same date. Depreciation is to be calculated @ 20% p.a. following Straight Line Method. Accounts are closed every year on 31st March.
Show Machinery Account and Provision for Depreciation Account for 2017–18, 2018–19 and 2019–20.

GUIDE TO ANSWERS

- (i) Depreciation Expense for the year ended 31st March, 2014—₹ 1,000; (ii) Net Book Value on 31st March, 2018—₹ 5,500; (iii) Loss on Sale of Asset on 31st March, 2020—₹ 2,900.
- Balance of Machinery A/c (31st March, 2020)—₹ 3,50,000; Provision for Depreciation A/c (31st March, 2020)—₹ 1,45,000 (M I—₹ 1,00,000, M II—₹ 40,000; M III—₹ 5,000); Loss on Sale of Machinery—₹ 20,000.