

## Problems under Hire Purchase system

From the following particulars, give journal entries in the books of the hire purchaser Mr. Ashok assuming that he has adopted cash price method. Cash price – Rs. 20,580; rate of interest- 5%; down payment- Rs.8,000; annual instalments paid at the end of the year – I- Rs.4,000; II – Rs.3,000; III – Rs.7,000. The asset is subject to depreciation on written down value method at 10% p.a.

**Solution:**

Here the Hire Purchase Price, Cash Price, Rate of Interest and the amount of annual instalment is given, hence we need not calculate the Cash price. But the amount of annual interest has to be calculated with the help of a working note.

**Working Note I: Calculation of interest:**

Statement showing calculation of interest	Rs.
Cash price of the computer as on 1 <sup>st</sup> Jan [I year]	20,580
- Down payment	<u>8,000</u>
Outstanding balance of cash price at the beginning of the I year	12,580
+ interest for the I year <span style="float: right;">[12,580x5%]</span>	<u>629</u>
Total amount outstanding at the end of the I year	13,209
- Instalment paid on 31 <sup>st</sup> Dec [I year]	<u>4,000</u>
Outstanding balance of cash price at the beginning of the II year	9,209
+ interest for the II year <span style="float: right;">[9,209x5%]</span>	<u>460</u>
Total amount outstanding at the end of the II year	9,669
- Instalment paid on 31 <sup>st</sup> Dec [II year]	<u>3,000</u>
Outstanding balance of cash price at the beginning of the III year	6,669
+ interest for the III year (last year) <span style="float: right;">[6,669-7,000]</span>	<u>331</u>
Total amount outstanding at the end of the III year	7,000
- Instalment paid on 31 <sup>st</sup> Dec [III year]	<u>7,000</u>

Total interest = 629 [I yr] + 460 [II yr] + 331 [III yr] = Rs.1420

Check: Total Interest = Hire purchase price – Cash price

Hire purchase price = Down payment + total amount of instalments

$$8,000 + 14,000 = 22,000$$

Total interest = 22,000 – 20,580 = Rs.1420

**Working note II – Calculation of depreciation**

Depreciation is calculated on the cash price of the asset using written down balance method @ 10% p.a

Year I- cash price of the asset Rs.20,580 x 10% = 2,058

Year II- cash price of the asset Rs.20,580- 2058 =18,522 Rs.18,522 x 10% = 1,852

Year III – cash price of the asset Rs.18,522- 1,852= 16,670 Rs.16,670 x 10% = 1,667

Journal entries in the books of Ashok [hire purchaser]

Year	Particulars	L.F	Debit [Rs]	Credit [Rs.]
Year I				
Jan 1	Asset a/c Dr To Hire Vendor's a/c [Being asset purchased on hire purchase basis]		20,580	20,580
Jan 1	Hire Vendor's a/c To Bank a/c [Being down payment made to Hire vendor]	Dr	8,000	8,000
Dec 31	Interest a/c Dr To Hire Vendor's a/c [Being interest on first instalment due]		629	629
Dec 31	Hire Vendor's a/c To Bank a/c [Being I instalment paid to hire vendor]	Dr	4,000	4,000
Dec 31	Depreciation a/c To Asset a/c [Being depreciation for the year]	Dr	2,058	2,058
Dec 31	Profit or Loss a/c To Interest a/c To Depreciation a/c [Being interest & depreciation transferred to P/l a/c]	Dr	2,687	629 2,058
Year II				
Dec 31	Interest a/c Dr To Hire Vendor's a/c [Being interest on second instalment due]		460	460
Dec 31	Hire Vendor's a/c To Bank a/c [Being II instalment paid to hire vendor]	Dr	3,000	3,000
Dec 31	Depreciation a/c To Asset a/c [Being depreciation for the year]	Dr	1,852	1,852
Dec 31	Profit or Loss a/c To Interest a/c To Depreciation a/c [Being interest & depreciation transferred to P/l a/c]	Dr	2,312	460 1,852
Year III				
Dec 31	Interest a/c Dr To Hire Vendor's a/c [Being interest on first instalment due]		331	331
Dec 31	Hire Vendor's a/c To Bank a/c [Being I instalment paid to hire vendor]	Dr	7,000	7,000
Dec 31	Depreciation a/c To Asset a/c [Being depreciation for the year]	Dr	1,667	1,667
Dec 31	Profit or Loss a/c To Interest a/c	Dr	1,998	331

	To Depreciation a/c [Being interest & depreciation transferred to P/l a/c]			1,667
--	---	--	--	-------

Pankaj purchased 4 machines costing Rs.14,00,000 each for Rs.60,00,000 on hire purchase system on 1<sup>st</sup> Jan ,2014. Hire purchase price was to be paid Rs.15,00,000 down and three instalments of Rs.15,00,000 each at the end of each year. Pankaj depreciates machines @10% p.a. on straight line method. Give journal entries in the books of Pankaj and in the books of Hire vendor.

Solution:

Here the Hire Purchase Price, the total Cash Price and the amount of annual instalment is given. But the hire purchase interest included in each instalment are not given individually.

Working Note: Calculation of Interest (3<sup>rd</sup> method from the calculation of interest)

Interest = hire purchase price – cash price

Interest = 60,00,000 – (14,00,000x 4) = 4,00,000

Hire purchase price outstanding at the beginning of each year

Total hire purchase price outstanding at the beginning of the I year	60,00,000
- Down payment made	15,00,000
Hire purchase price outstanding 1 <sup>st</sup> Jan I year	45,00,000
- Amount of instalment paid on 31 <sup>st</sup> Dec I year	15,00,000
Hire purchase price outstanding 1 <sup>st</sup> Jan II year	30,00,000
-Amount of instalment paid on 31 <sup>st</sup> Dec II year	15,00,000
Hire purchase price outstanding 1 <sup>st</sup> Jan II year	15,00,000

Ratio of hire purchase amount outstanding for the I ,II & III years

= 45,00,000 : 30,00,000 : 15,00,000 OR 45 : 30 : 15 OR 3 : 2 : 1

Interest of Rs.4,00,000 should be divided among the three instalments in the ratio of 3 : 2 : 1 as follows:

Interest for the year 2016 [I instalment]  $\frac{3}{6} \times 4,00,000 = 2,00,000$

Interest for the year 2017 [II instalment]  $\frac{2}{6} \times 4,00,000 = 1,33,333$

Interest for the year 2018 [III instalment]  $\frac{1}{6} \times 4,00,000 = 66,667$

Total interest= 4,00,000

Check: Total Interest = Hire purchase price – Cash price

= 60,00,000- 56,00,000 = Rs.4,00,000

Working note II: calculation of depreciation

Depreciation is calculated on the cash price of the asset using straight line method @ 10% p.a

Rs. 56,00,000 x 10% = Rs.5,60,000

Note: In the absence of specific instruction regarding the method to be followed, cash price method should be followed.

Journal entries in the books of Pankaj [Hire Purchaser]

Year	Particulars	L.F	Debit [Rs]	Credit [Rs.]
Year I				
Jan 1	Asset a/c (14,00,000x4) Dr To Hire Vendor's a/c [Being asset purchased on hire purchase basis]		56,00,000	56,00,000
Jan 1	Hire Vendor's a/c Dr To Bank a/c [Being down payment made to Hire vendor]		15,00,000	15,00,000
Dec 31	Interest a/c Dr To Hire Vendor's a/c [Being interest on first instalment due]		2,00,000	2,00,000
Dec 31	Hire Vendor's a/c Dr To Bank a/c [Being I instalment paid to hire vendor]		15,00,000	15,00,000
Dec 31	Depreciation a/c Dr To Asset a/c [Being depreciation for the year]		5,60,000	5,60,000
Dec 31	Profit or Loss a/c Dr To Interest a/c To Depreciation a/c [Being interest & depreciation transferred to P/l a/c]		7,60,000	2,00,000 5,60,000
Year II				
Dec 31	Interest a/c Dr To Hire Vendor's a/c [Being interest on second instalment due]		1,33,333	1,33,333
Dec 31	Hire Vendor's a/c Dr To Bank a/c [Being II instalment paid to hire vendor]		15,00,000	15,00,000
Dec 31	Depreciation a/c Dr To Asset a/c [Being depreciation for the year]		5,60,000	5,60,000
Dec 31	Profit or Loss a/c Dr To Interest a/c To Depreciation a/c [Being interest & depreciation transferred to P/l a/c]		6,93,333	1,33,333 5,60,000
Year III				
Dec 31	Interest a/c Dr To Hire Vendor's a/c [Being interest on first instalment due]		66,667	66,667

Dec 31	Hire Vendor's a/c To Bank a/c [Being I instalment paid to hire vendor]	Dr		15,00,000	15,00,000
Dec 31	Depreciation a/c To Asset a/c [Being depreciation for the year]	Dr		5,60,000	5,60,000
Dec 31	Profit or Loss a/c To Interest a/c To Depreciation a/c [Being interest & depreciation transferred to P/l a/c]	Dr		6,26,667	66,667 5,60,000

Journal entries in the books of Hire Vendor

Year	Particulars	L.F	Debit Rs.	Credit Rs.
Year I				
Jan 1	Hire Purchaser's a/c To Hire Sale a/c [Being sales under hire purchase system]	Dr	56,00,000	56,00,000
Jan 1	Bank a/c Dr To Hire Purchaser's a/c [Being down payment received]		15,00,000	15,00,000
Dec 31	Hire Purchaser's a/c To Interest a/c [Being interest charged]	Dr	2,00,000	2,00,000
Dec 31	Bank a/c Dr To Hire Purchaser's a/c [Being the first instalment received]		15,00,000	15,00,000
Dec 31	Interest a/c Dr To Profit or Loss a/c [Being the transfer of interest to P/L a/c]		2,00,000	2,00,000
Year II				
Dec 31	Hire Purchaser's a/c To Interest a/c [Being interest charged]	Dr	1,33,333	1,33,333
Dec 31	Bank a/c Dr To Hire Purchaser's a/c [Being the second instalment received]		15,00,000	15,00,000
Dec 31	Interest a/c Dr To Profit or Loss a/c [Being the transfer of interest to P/L a/c]		1,33,333	1,33,333
Year III				
Dec 31	Hire Purchaser's a/c To Interest a/c [Being interest charged]	Dr	66,667	66,667
Dec 31	Bank a/c Dr To Hire Purchaser's a/c [Being the third instalment received]		15,00,000	15,00,000
Dec 31	Interest a/c Dr To Profit or Loss a/c [Being the transfer of interest to P/L a/c]		66,667	66,667

