

TOPIC – 7

ACCOUNTING STANDARD - 19

LEASES

TOTAL NO. OF QUESTIONS - 13

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SERIES 100 - FINANCE LEASE (LESSEE)

Q.AS19.SM.101: (MTP Nov21)

S. Square Private Limited has taken machinery on finance lease from S.K. Ltd. The information is as under:

Lease term = 4 years

Fair value at inception of lease = Rs.20,00,000

Lease rent = Rs.6,25,000 p.a. at the end of year

Guaranteed residual value = Rs.1,25,000

Expected residual value = Rs.3,75,000 (estimated by lessor)

Implicit interest rate = 15%

Discounted rates for 1st year, 2nd year, 3rd year and 4th year are 0.8696, 0.7561, 0.6575 and 0.5718 respectively.

Calculate the value of the lease liability as per AS-19.



Q.AS19.OM.102: (Old Course PM)

Annual lease rent = Rs.40,000 at the end of each year

Lease period = 5 years

Guaranteed residual value = Rs.14,000

Fair value at the inception (beginning) of lease = Rs.1,50,000

Interest rate implicit on lease is 12.6%. The present value factors at 12.6% are 0.89, 0.79, 0.7, 0.622, 0.552 at the end of first, second, third, fourth and fifth year respectively.

Show the Journal entry to record the asset taken on finance lease in the books of the lessee.



Q.AS19.RMP.103: (RTP – Nov18, Exam May19 & MTP May'19, Nov'22, May'24)

ABC Ltd. took a machine on lease from XYZ Ltd., the fair value being Rs. 10,00,000. The economic life of the machine as well as the lease term is 4 years. At the end of each year, ABC Ltd. pays Rs. 3,50,000. The lessee has guaranteed a residual value of Rs. 40,000 on expiry of the lease to the lessor. However, XYZ Ltd. estimates that the residual value of the machinery will be Rs. 35,000 only. The implicit rate of return is 16% and PV factors at 16% for year 1, year 2, year 3 and year 4 are 0.8621, 0.7432, 0.6407 and 0.5523 respectively. You are required to calculate the value of machinery to be considered by ABC Ltd. and the finance charges for each year.



SOLUTIONS OF ABOVE QUESTIONS OF SERIES 100

SOLUTION Q101

According to para 11 of AS 19 "Leases", the lessee should recognise the lease as an asset and a liability at an amount equal to the lower of the fair value of the leased asset at the inception of the finance lease & the present value of the minimum lease payments from the standpoint of the lessee.

In calculating the present value of the minimum lease payments the discount rate is the interest rate implicit in the lease. Present value of minimum lease payments will be calculated as follows:

Year	MLP	Internal Rate of Return	Present Value
1	6,25,000	0.8696	5,43,500
2	6,25,000	0.7561	4,72,563
3	6,25,000	0.6575	4,10,937
4	6,25,000 + 1,25,000 GRV	0.5718	4,28,850
Total	26,25,000		18,55,850

Present value of minimum lease payments Rs.18,55,850 is less than fair value at the inception of lease i.e. Rs.20,00,000, therefore, the lease liability should be recognised at Rs.18,55,850 as per AS19.

SOLUTION Q102

Journal entry in the books of Lessee

	Dr. Amt.	Cr. Amt.
Assets A/c Dr.	1,49,888	
To Lessor (Lease Liability)		1,49,888
<i>(Being Recognition of Finance Lease as an Asset & a Liability)</i>		

Working Note:

Year	Lease Payment	Dis. Factor (12.6%)	Present Value
1	40,000	0.89	35,600
2	40,000	0.79	31,600
3	40,000	0.70	28,000
4	40,000	0.622	24,880
5	40,000	0.522	22,080
5	14,000 (GRV)	0.552	7,728
			1,49,888

SOLUTION Q103

As per AS 19 "Leases", the lessee should recognize the lease as an asset and a liability at the inception of a finance lease. Such recognition should be at an amount equal to the fair value of the leased asset at the inception of lease. However, if the fair value of the leased asset exceeds the present value of minimum lease payment from the standpoint of the lessee, the amount recorded as an asset and liability should be the present value of minimum lease payments from the standpoint of the lessee.

Value of machinery

In the given case, fair value of the machinery is Rs. 10,00,000 and the net present value of minimum lease payments is Rs. 10,01,497 (Refer working Note). As the present value of the machine is more than the fair value of the machine, the machine and the corresponding liability will be recorded at fair value of Rs. 10,00,000.

Calculation of finance charges for each year

Year	Finance charge (Rs)	Payment (Rs)	Reduction in outstanding liability (Rs)	Outstanding liability (Rs)
1st year beginning	-	-	-	10,00,000
End of 1st year	1,60,000	3,50,000	1,90,000	8,10,000
End of 2nd year	1,29,600	3,50,000	2,20,400	5,89,600
End of 3rd year	94,336	3,50,000	2,55,664	3,33,936
End of 4th year	56,064	3,90,000*	2,96,570	0

*Assuming Lessee is paying GRV also

Working Note:**Present value of minimum lease payments**

Annual lease rental x PV factor	Rs 9,79,405
Rs. 3,50,000 x (0.8621 + 0.7432 + 0.6407 + 0.5523)	
Present value of guaranteed residual value Rs 40,000 x (0.5523)	Rs 22,092
	Rs 10,01,497

Alternate 2: -

If Lessee has not Paid GRV of 40,000. Then Assets need to be returned to Lessor. In such case, Asset to Derecognised at BV & Lease Liability having BV of 40,000 shall be derecognised. Difference shall be transferred to P&L.

SERIES 200 - FINANCE LEASE (LESSOR)**Q.AS19.RMP.201 (RTP - May'19; May'20 & Exams Jan'25) (Annual Lease Payment is Missing)**

Aksat International Limited has given a machinery on lease for 36 months, and its useful life is 60 months. Cost & fair market value of the machinery is Rs. 5,00,000. The amount will be paid in 3 equal annual installments and the lessee will return the machinery to lessor at termination of lease. The unguaranteed residual value at the end of 3 years is Rs. 50,000. IRR of investment is 10% and present value of annuity factor of Rs 1 due at the end of 3 years at 10% IRR is 2.4868 and present value of Rs. 1 due at the end of 3rd year at 10% IRR is 0.7513.

You are required to comment with reason whether the lease constitute finance lease or operating lease. If it is finance lease, calculate unearned finance income.

Q.AS19.SM.202:

Prakash Limited leased a machine to Badal Limited on the following terms:



		Rs. in Lakhs
1	Fair Value of machine	48.00
2	Lease Term	5 years
3	Lease Rental per annum	8.00
4	Guaranteed Residual Value	1.60
5	Expected Residual Value	3.00
6	Internal Rate of Return	15%

Discounted rates for 1st year to 5th year are 0.8696, 0.7561, 0.6575, 0.5718, and 0.4972 respectively. Ascertain Unearned Finance Income.

Q.AS19.RMP.203: (RTP May 18, Nov 22) (Annual Lease Payment is Missing)

WIN Ltd. has entered into a three-year lease arrangement with Tanya sports club in respect of Fitness Equipment's costing Rs. 16,99,999.50. The annual lease payments to be made at the end of each year are structured in such a way that the sum of the Present Values of the lease payments and that of the residual value together equal the cost of the equipment's leased out. The unguaranteed residual value of the equipment at the expiry of the lease is estimated to be Rs. 1,33,500. The assets would revert to the lessor at the end of the lease. Given that the implicit rate of interest is 10%.



You are required to calculate the amount of the annual lease payment and the unearned finance income. Discounting Factor at 10% for years 1, 2 and 3 are 0.909, 0.826 and 0.751 respectively.

Q.AS19.RMP.204: (MTP Nov'22)

Sun Limited leased a machine to Moon Limited on the following terms:

	(Amount in Rs.)
Fair value at inception of lease	50,00,000
Lease Term	4 Years
Lease Rental per annum	16,00,000
Guaranteed residual value	3,00,000
Expected residual value	4,50,000
Implicit Interest rate	15%

Discounted rates for 1st year, 2nd year, 3rd year and 4th year are 0.8696, 0.7561, 0.6575 and 0.5718 respectively. Calculate the value of Lease Liability and ascertain Unearned Finance Income as per AS-19.

SOLUTIONS OF ABOVE QUESTIONS OF SERIES 200

SOLUTION Q201**Determination of Nature of Lease**

Present value of unguaranteed residual value at the end of 3rd year

$$= \text{Rs. } 50,000 \times 0.7513$$

$$= \text{Rs. } 37,565$$

Present value of lease payments = Rs. 5,00,000 – Rs. 37,565

$$= \text{Rs. } 4,62,435$$

The percentage of present value of lease payments to fair value of the equipment is

$$(\text{Rs. } 4,62,435 / \text{Rs. } 5,00,000) \times 100 = 92.487\%$$

Since, lease payments substantially covers the major portion of the fair value; the lease constitutes a finance lease.

Calculation of Unearned Finance Income

Annual lease payment = Rs. 4,62,435 / 2.4868 = Rs. 1,85,956 (approx.)

Gross investment in the lease = Total minimum lease payments + unguaranteed residual value

$$= (\text{Rs. } 1,85,956 \times 3) + \text{Rs. } 50,000$$

$$= \text{Rs. } 5,57,868 + \text{Rs. } 50,000 = \text{Rs. } 6,07,868$$

Unearned finance income = Gross investment - Present value of minimum lease payments and unguaranteed residual value

$$= \text{Rs. } 6,07,868 - \text{Rs. } 5,00,000 = \text{Rs. } 1,07,868$$

Solution Q202

As per AS 19 on Leases, **unearned finance income** is the difference between (a) the **gross investment** in the lease and (b) the present value of minimum lease payments under a finance lease from the standpoint of the lessor; and any unguaranteed residual value accruing to the lessor, at the interest rate implicit in the lease.

Where:

(a) **Gross investment** in the lease is the aggregate of (i) minimum lease payments from the standpoint of the lessor and (ii) any unguaranteed residual value accruing to the lessor.

Gross investment = Minimum lease payments + Unguaranteed residual value

$$= [\text{Total lease rent} + \text{Guaranteed residual value (GRV)}] + \text{Unguaranteed residual value (URV)}$$

$$= [(8,00,000 \times 5 \text{ years}) + 1,60,000] + 1,40,000 = 43,00,000 \text{ (a)}$$

(b) Table showing present value of (i) Minimum lease payments (MLP) and (ii) Unguaranteed residual value (URV).

Year	MLP Inclusive of URV	Internal Rate of Return (Dis. Fact @ 15%)	Present Value Rs.
1	8,00,000	0.8696	6,95,680
2	8,00,000	0.7561	6,04,880
3	8,00,000	0.6575	5,26,000
4	8,00,000	0.5718	4,57,440
5	8,00,000	0.4972	3,97,760
	1,60,000 (GRV)	0.4972	79,552
	1,40,000 (UGRV)	0.4972	69,608
	43,00,000		28,30,920 (b)

$$\text{Unearned Finance Income (a) - (b) = } 43,00,000 - 28,30,920 = 14,69,080.$$

SOLUTION Q203**(i) Computation of annual lease payment to the lessor**

	Rs
Cost of equipment	16,99,999.50
Unguaranteed residual value	1,33,500.00
Present value of residual value after third year @ 10% (Rs. 1,33,500 × 0.751)	1,00,258.50
Fair value to be recovered from lease payments (Rs. 16,99,999.5 – Rs. 1,00,258.5)	15,99,741.00
Present value of annuity for three years is 2.486	
Annual lease payment = Rs. 15,99,741 / 2.486	6,43,500.00

(ii) Computation of Unearned Finance Income

	Rs
Total lease payments (Rs. 6,43,500 × 3)	19,30,500
Add: Unguaranteed residual value	1,33,500
Gross investment in the lease	20,64,000.00
Less: Present value of investment (lease payments and residual value) (Rs. 1,00,258.5 + Rs. 15,99,741)	(16,99,999.50)
Unearned finance income	3,64,000.50

SOLUTION Q204

According to AS 19 "Leases", the lessee should recognise the lease as an asset and a liability at an amount equal to the fair value of the leased asset at the inception of the finance lease. However, if the fair value of the leased asset exceeds the present value of the minimum lease payments from the standpoint of the lessee, the amount recorded as an asset and a liability should be the present value of the minimum lease payments from the standpoint of the lessee. In calculating the present value of the minimum lease payments, the discount rate is the interest rate implicit in the lease. Present value of minimum lease payments will be calculated as follows:

Year	Minimum Lease Payment Rs.	Internal rate of return (Discount rate @ 15%)	Present value Rs.
1	16,00,000	0.8696	13,91,360
2	16,00,000	0.7561	12,09,760
3	16,00,000	0.6575	10,52,000
4	19,00,000*	0.5718	10,86,420
Total	67,00,000		47,39,540

Present value of minimum lease payments i.e., Rs. 47,39,540 is less than fair value at the inception of lease i.e., Rs. 50,00,000, therefore, the value of lease is Rs. 47,39,540 and lease liability should be recognized in the books at Rs. 47,39,540 as per AS 19.

Calculation of Unearned Finance Income

As per AS 19 on Leases, unearned finance income is the difference between (a) the gross investment in the lease and (b) the present value of minimum lease payments under a finance lease from the standpoint of the lessor; and any unguaranteed residual value accruing to the lessor, at the interest rate implicit in the lease.

Where:

(i) Gross investment in the lease is the aggregate of (i) minimum lease payments from the stand point of the lessor and (ii) any unguaranteed residual value accruing to the lessor.

Gross investment = Minimum lease payments + Unguaranteed residual value

$$= [\text{Total lease rent} + \text{Guaranteed residual value (GRV)}] + \text{Unguaranteed residual value (URV)}$$

$$= [(Rs. 16,00,000 \times 4 \text{ years}) + Rs. 3,00,000] + Rs. 1,50,000 = Rs. 68,50,000$$

(ii) Present value of minimum lease payment from Lessor's view point

$$\text{Lease liability Rs. } 47,39,540 + \text{present value of (URV) unguaranteed residual value (Rs. } 1,50,000 \times 0.5718) = Rs. 48,25,310$$

$$\text{Unearned Finance Income} = (a) - (b) = Rs. 68,50,000 - Rs. 48,25,310 = Rs. 20,24,690$$

*Minimum Lease Payment of 4th year includes guaranteed residual value amounting i.e 16,00,000 + 3,00,000 = 19,00,000.

SERIES 300 - OPERATING LEASE

Q.AS19.OM.301:

On April 1, 2002 ABC Ltd. leases equipment for 4 years to XYZ Ltd. The Cost of the equipment is Rs. 15,00,000 and has a useful life of 10 years (assume straight line method of depreciation). The lease payments to be made are as follows:



Year	Amount
1	1,00,000
2	1,50,000
3	1,75,000
4	2,00,000

The lease is classified as an operating lease. How would this lease be accounted for in the books of accounts of the Lessee and the Lessor?

Q.AS19.SM.302: (MTP May21)

A machine was given on 3 years operating lease by a dealer of the machine for equal annual lease rentals to yield 30% profit margin on cost Rs. 1,50,000. Economic life of the machine is 5 years and output from the machine are estimated as 40,000 units, 50,000 units, 60,000 units, 80,000 units and 70,000 units consecutively for 5 years. Straight line depreciation in proportion of output is considered appropriate. Compute the following:



- (i) Annual Lease Rent
- (ii) Lease Rent income to be recognized in each operating year and
- (iii) Depreciation for 3 years of lease.

SOLUTIONS OF ABOVE QUESTIONS OF SERIES 300

ANSWER: Q301

Lessee & Lessor shall recognise lease rent on straight line basis unless another systematic basis is more representative of time pattern of users benefit.

$$\text{Exp. P.a.} = (1,00,000 + 1,50,000 + 1,75,000 + 2,00,000) / 4 = 1,56,250$$

SOLUTION: Q302**(i) Annual lease rent**

Total lease rent

$$= 130\% \text{ of Rs. } 1,50,000 \times \frac{\text{output during lease period}}{\text{total output}}$$

$$= 130\% \text{ of Rs. } 1,50,000 \times (40,000+50,000+60,000) / (40,000+50,000+ 60,000+80,000+70,000)$$

$$= 1,95,000 \times 1,50,000 \text{ units} / 3,00,000 \text{ units} = \text{Rs. } 97,500$$

Annual lease rent = Rs. 97,500 / 3 = Rs. 32,500

(ii) Lease rent Income to be recognized in each operating year

Total lease rent should be recognised as income in proportion of output during lease period, i.e. in the proportion of 40:50:60.

Hence income recognised in years 1,2 and 3 will be as:

Year 1 Rs. 26,000,

Year 2 Rs. 32,500 and

Year 3 Rs. 39,000.

(iii) Depreciation for three years of lease

Since depreciation in proportion of output is considered appropriate, the depreciable amount Rs. 1,50,000 should be allocated over useful life 5 years in proportion of output, i.e. in proportion of 40:50:60:80:70

Depreciation for year 1 is Rs. 20,000, year 2 = 25,000 and year 3 = 30,000.

SERIES 400 - SALE & LEASE BACK**Q.AS19.SM.401:**

A Ltd. sold machinery having WDV of Rs. 40 Lacs to B Ltd. for Rs. 50 Lacs and the same machinery was leased back by B Ltd. to A Ltd. The lease back is operating lease.

Comment if-



- Fair Market Value is Rs. 50 Lacs.
- Fair Market Value is Rs. 60 Lacs.
- Fair value is Rs. 45 Lacs and the sale price is Rs. 38 Lacs.
- Fair value is Rs. 40 Lacs and the sale price is Rs. 50 Lacs.
- Fair value is Rs. 46 Lacs and the sale price is Rs. 50 Lacs.
- Fair value is Rs. 35 Lacs and the sale price is Rs. 39 Lacs.

SOLUTION

Following will be the treatment in the given cases:

- When sales price of 50 lakhs is equal to fair value, A Ltd. should immediately recognise the profit of 10 lakhs (i.e. 50 - 40) in its books.
- When fair value is 60 lakhs then also profit of 10 lakhs should be immediately recognised by A Ltd.
- When fair value of leased machinery is 45 lakhs & sales price is 38 lakhs, then loss of 2 lakhs (40 - 38) to be immediately recognised by A Ltd. in its books provided loss is not compensated by future lease payment.
- When fair value is 40 lakhs & sales price is 50 lakhs then, profit of 10 lakhs is to be deferred and amortised over the lease period.
- When fair value is 46 lakhs & sales price is 50 lakhs, profit of 6 lakhs (46-40) to be immediately recognised in its books & balance profit of 4 lakhs (50-46) is to be amortised/deferred over lease period. When fair value is 35 lakhs & sales price is 39 lakhs, then the loss of 5 lakhs (40-35) to be immediately recognised by A Ltd. in its books and profit of 4 lakhs (39-35) should be amortised/deferred over lease period.

SERIES 500 - MISC. CATEGORY**Q.AS19.SM.501: (SIMILAR in Exam Nov19) (RTP Nov20, May22)**

Classify the following into either operating or finance lease:

- (i) Lessee has option to purchase the asset at lower than fair value, at the end of lease term;
- (ii) Economic life of the asset is 7 years, lease term is 6 years, but asset is not acquired at the end of the lease term;
- (iii) Economic life of the asset is 6 years, lease term is 2 years, but the asset is of special nature and has been procured only for use of the lessee;
- (iv) Present value (PV) of Minimum lease payment (MLP) "X" = Fair value of the asset is "Y".

**Q.AS19.OM.502: (Old Course PM)**

What do you understand by the term "Interest rate implicit on lease"?

Calculate the interest rate implicit on lease from the following details:

Annual Lease Rental	Rs. 80,000 at the end of each year
Lease Period	5 years
Guaranteed Residual Value	Rs. 40,000
Unguaranteed Residual Value	Rs. 24,000
Fair Value at the inception of the lease	Rs. 3,20,000



Discounted rates for the first 5 years are as below:

At 10% - 0.909, 0.826, 0.751, 0.683, 0.621

At 14% - 0.877, 0.769, 0.675, 0.592, 0.519

Hint Answer: 12.609% or 12.61%

Q.AS19.RMP.503: (RTP Nov19, May21, May'24, May'25 & MTP Aug18)

Suraj Ltd. wishes to obtain a machinery costing Rs. 30 Lacs by way of Lease. The effective life of machine is 14 years, but the company required it only for first 5 years. It enters to an agreement with Ashok Ltd., of a lease rental of Rs. 3 lacs payable at the end of each year. The implicit rate of interest is 15%. The chief accountant of Suraj Ltd. is not sure about the treatment of these lease rentals and seeks your advice.



SOLUTIONS OF ABOVE QUESTIONS OF SERIES 500

SOLUTION Q501

- (i) If it becomes certain at the inception of lease itself that the option will be exercised by the lessee, it is a Finance Lease.
- (ii) The lease will be classified as a finance lease, since a substantial portion of the life of the asset is covered by the lease term.
- (iii) Since the asset is procured only for the use of lessee, it is a finance lease.
The lease is a finance lease if $X = Y$, or where X substantially equals Y .

SOLUTION Q503

As per AS 19 'leases', a lease will be classified as finance lease if at the inception of the lease, the present value of minimum lease payment amounts to at least substantially all of the fair value of leased asset. In the given case, the implicit rate of interest is given at 15%. The present value of minimum lease payments at 15% using PV- Annuity Factor can be computed as:

Annuity Factor (Year 1 to Year 3)	3.36
Present Value of minimum lease payments (Rs. 3 lakhs each year)	Rs. 10.08 lakhs (approx.)

Thus, present value of minimum lease payments is Rs.10.08 lakhs and the fair value of the machine is Rs. 30 lakhs. In a finance lease, lease term should be for the major part of the economic life of the asset even if title is not transferred. However, in the given case, the effective useful life of the machine is 14 years while the lease is only for three years. Therefore, lease agreement is an operating lease. Lease payments under an operating lease should be recognized as an expense in the statement of profit and loss on a straight-line basis over the lease term unless another systematic basis is more representative of the time pattern of the user's benefit.