

FOR SHORTCUT TO IND AS WISDOM: SCAN ME!



IND AS 32



IND AS 109

TEST YOUR KNOWLEDGE

Questions

- As part of staff welfare measures, Y Co Ltd. has contracted to lend to its employees sums of money at 5% per annum rate of interest. The amounts lent are to be repaid in five equal instalments for principle along with the interest. The market rate of interest is 10% per annum for comparable loans. Y lent ₹ 1,600,000 to its employees on 1st January 20X1.

Following the principles of recognition and measurement as laid down in Ind AS 109, you are required to record the entries for the year ended 31 December 20X1, for the transaction and also compute the value of loan initially to be recognised and amortised cost for all subsequent years.

For the purpose of calculation, following discount factors at interest rate of 10% per annum may be adopted –

At the end of year –

Year	Present value factor
1	.909
2	.827
3	.751
4	.683
5	.620

- Wheel Co. Limited has a policy of providing subsidized loans to its employees for the purpose of buying or building houses. Mr. X, who's executive assistant to the CEO of Wheel Co. Limited, took a loan from the Company on the following terms:

- Interest rate: 4% for the first 400,000 and 7% for the next 600,000
- Start date: 1 January 20X1
- Tenure: 5 years
- Pre-payment: Full or partial pre-payment at the option of the employee
- The principal amount of loan shall be recovered in 5 equal annual instalments and will be first applied to 7% interest bearing principal
- The accrued interest shall be paid on an annual basis
- Mr. X must remain in service till the term of the loan ends

The market rate of a comparable loan available to Mr. X, is 12% per annum.

Following table shows the contractually expected cash flows from the loan given to Mr. X:

(amount in ₹)

Date	Outflows	Inflows			Principal outstanding
		Principal	Interest income 7%	Interest income 4%	
1-Jan-20X1	(1,000,000)				1,000,000
31-Dec-20X1		200,000	42,000	16,000	800,000
31-Dec-20X2		200,000	28,000	16,000	600,000
31-Dec-20X3		200,000	14,000	16,000	400,000
31-Dec-20X4		200,000	-	16,000	200,000
31-Dec-20X5		200,000	-	8,000	-

Mr. S, pre-pays ₹ 200,000 on 31 December 20X2, reducing the outstanding principal as at that date to ₹ 400,000.

Following table shows the actual cash flows from the loan given to Mr. X, considering the pre-payment event on 31 December 20X2:

(amount in ₹)

Date	Outflows	Inflows			Principal outstanding
		Principal	Interest income 7%	Interest income 4%	
1-Jan-20X1	(1,000,000)				1,000,000
31-Dec-20X1		200,000	42,000	16,000	800,000
31-Dec-20X2		400,000	28,000	16,000	400,000
31-Dec-20X3		200,000	-	16,000	200,000
31-Dec-20X4		200,000	-	8,000	-
31-Dec-20X5		-	-	-	-

Record journal entries in the books of Wheel Co. Limited considering the requirements of Ind AS 109.

3. Wheel Co. Limited borrowed ₹ 500,000,000 from a bank on 1 January 20X1. The original terms of the loan were as follows:

- Interest rate: 11%
- Repayment of principal in 5 equal instalments
- Payment of interest annually on accrual basis
- Upfront processing fee: ₹ 5,870,096

Effective interest rate on loan: 11.50%

On 31 December 20X2, Wheel Co. Limited approached the bank citing liquidity issues in meeting the cash flows required for immediate instalments and re-negotiated the terms of the loan with banks as follows:

- Interest rate 15%
- Repayment of outstanding principal in 10 equal instalments starting 31 December 20X3
- Payment of interest on an annual basis

Record journal entries in the books of Wheel Co. Limited till 31 December 20X3, after giving effect of the changes in the terms of the loan on 31 December 20X2

4. K Ltd. issued 500,000, 6% convertible debentures @ ₹ 10 each on 01 April 20X1. The debentures are due for redemption on 31 March 20X5 at a premium of 10%, convertible into 2,50,000 equity shares of Rs. 10 each i.e. to the extent of 50% and balance to be settled in cash to the debenture holders. The interest rate on equivalent debentures without conversion rights was 10%.

You are required to separate the debt and equity components at the time of issue and show the accounting entries in Company's books at initial recognition. The following present values of Re 1 at 6% and at 10% are provided:

Interest rate	Year 1	Year 2	Year 3	Year 4
6%	0.94	0.89	0.84	0.79
10%	0.91	0.83	0.75	0.68

5. On 1 April 20X1, an 8% convertible loan with a nominal value of ₹ 6,00,000 was issued at par. It is redeemable on 31 March 20X5 also at par. Alternatively, it may be converted into equity shares on the basis of 100 new shares for each ₹ 200 worth of loan.

An equivalent loan without the conversion option would have carried interest at 10%. Interest of ₹ 48,000 has already been paid and included as a finance cost.

Present value rates are as follows:

Year End	@ 8%	@ 10%
1	0.93	0.91
2	0.86	0.83
3	0.79	0.75
4	0.73	0.68

Explain how will the Company account for the above loan notes in the financial statements for the year ended 31 March 20X2?

6. On 1 April 20X1, Sun Limited guarantees a ₹ 10,00,000 loan of Subsidiary – Moon Limited, which Bank STDK has provided to Moon Limited for three years at 8%.

Interest payments are made at the end of each year and the principal is repaid at the end of the loan term.

If Sun Limited had not issued a guarantee, Bank STDK would have charged Moon Limited an interest rate of 11%. Sun Limited does not charge Moon Limited for providing the guarantee.

On 31 March 20X2, there is 1% probability that Moon Limited may default on the loan in the next 12 months. If Moon Limited defaults on the loan, Sun Limited does not expect to recover any amount from Moon Limited.

On 31 March 20X3, there is 3% probability that Moon Limited may default on the loan in the next 12 months. If Moon Limited defaults on the loan, Sun Limited does not expect to recover any amount from Moon Limited.

Provide the accounting treatment of financial guarantee as per Ind AS 109 in the books of Sun Ltd., on initial recognition and in subsequent periods till 31 March 20X3.

Answers

1. (i) Calculation of initial measurement amount of loan to its employees:

Year end	Cash flow		Total	PV factor	Present value
	Principal	Interest @ 5%			
20X1	320,000	80,000	400,000	.909	363,600
20X2	320,000	64,000	384,000	.827	317,568
20X3	320,000	48,000	368,000	.751	276,368
20X4	320,000	32,000	352,000	.683	240,416
20X5	320,000	16,000	336,000	.620	<u>208,320</u>
					<u>1,406,272</u>

- (ii) Calculation of amortised cost of loan to employees

Year end	Amortised cost (opening balance)	Interest to be recognised	Repayment (including interest)	Amortised cost (closing balance)
20X1	1,406,272	140,627	400,000	1,146,899
20X2	1,146,899	114,690	384,000	877,589
20X3	877,589	87,759	368,000	597,348
20X4	597,348	59,735	352,000	305,083
20X5	305,083	30,917*	336,000	-

*305,083 x 10% = 30,508. Difference of ₹ 409 is due to approximation in computation.

- (iii) Journal Entries to be recorded of Y Ltd. for the year ended 31 December 20X1

Date	Particulars	Debit	Credit
1 Jan 20X1	Staff loan A/c	Dr. 14,06,272	
	Prepaid staff cost A/c*	Dr. 1,93,728	
	[(1,600,000 – 1,406,272), Refer part (ii)]		
	To Bank A/c		16,00,000
	(Being disbursement of loans to staff and excess loan balance over present value thereof in order to reflect the loan at its present value booked as prepaid staff cost)		

31 Dec 20X1	Staff loan A/c	Dr.	1,40,627	
	To Interest expense A/c (Being interest accrued on loans to staff)			1,40,627
31 Dec 20X1	Staff cost A/c	Dr.	38,746	
	To Prepaid expense A/c (Being prepaid expense charged for the year against staff cost)			38,746

* Where the difference between the amount given by the Company to its employees and its fair value represents another asset, then such asset shall be recognised. Accordingly, such difference is recognised as prepaid employee cost and amortised over the period of loan.

2. As per requirement of Ind AS 109, a financial instrument is initially measured and recorded at its fair value. Therefore, considering the market rate of interest of similar loan available to Mr. X is 12%, the fair value of the contractual cash flows shall be as follows:

Date	Inflows			Discount factor @12%	PV
	Principal	Interest income 7%	Interest income 4%		
31-Dec-20X1	200,000	42,000	16,000	0.8929	2,30,357
31-Dec-20X2	200,000	28,000	16,000	0.7972	1,94,515
31-Dec-20X3	200,000	14,000	16,000	0.7118	1,63,709
31-Dec-20X4	200,000	-	16,000	0.6355	1,37,272
31-Dec-20X5	200,000	-	8,000	0.5674	<u>1,18,025</u>
Total (fair value)					<u>8,43,878</u>

Benefit to Mr. X, to be considered a part of employee cost for Wheel Co. ₹ 1,56,121.

The deemed employee cost is to be amortised over the period of loan i.e. the minimum period that Mr. X must remain in service.

The amortization schedule of the ₹ 843,878 loan is shown in the following table:

Date	Loan outstanding	Total cash inflows (principal repayment + interest)	Interest @ 12%
1-Jan-20X1	843,878		
31-Dec-20X1	687,143	258,000	101,265
31-Dec-20X2	525,600	244,000	82,457

31-Dec-20X3	358,672	230,000	63,072
31-Dec-20X4	185,713	216,000	43,041
31-Dec-20X5	(0)	208,000	22,287*

* Difference is due to approximation.

Journal Entries to be recorded at every period end:

a. 1 January 20X1 –

Particulars		Dr. Amount (₹)	Cr. Amount (₹)
Loan to employee A/c	Dr.	843,879	
Pre-paid employee cost A/c	Dr.	156,121	
To Bank A/c			1,000,000
(Being loan asset recorded at initial fair value)			

b. 31 December 20X1 –

Particulars		Dr. Amount (₹)	Cr. Amount (₹)
Bank A/c	Dr.	258,000	
To Interest income (profit and loss) @12% A/c			101,265
To Loan to employee A/c			156,735
(Being first instalment of repayment of loan accounted for using the amortised cost and effective interest rate of 12%)			
Employee benefit (profit and loss) A/c	Dr.	31,224	
To Pre-paid employee cost A/c			31,224
(Being amortization of pre-paid employee cost charged to profit and loss as employee benefit cost)			

On 31 December 20X2, due to pre-payment of a part of loan by Mr. X, the carrying value of the loan shall be re-computed by discounting the future remaining cash flows by the original effective interest rate.

There shall be two sets of accounting entries on 31 December 20X2, first the realisation of the contractual cash flow as shown in (c) below and then the accounting for the pre-payment of ₹ 200,000 included in (d) below:

c. 31 December 20X2 –

Particulars	Dr. Amount (₹)	Cr. Amount (₹)
Bank A/c Dr. To Interest income (profit and loss) @12% A/c To Loan to employee A/c (Being second instalment of repayment of loan accounted for using the amortised cost and effective interest rate of 12%)	244,000	82,457 161,543
Employee benefit (profit and loss) A/c Dr. To Pre-paid employee cost A/c (Being amortization of pre-paid employee cost charged to profit and loss as employee benefit cost)	31,224	31,224

Computation of new carrying value of loan to employee:

Date	Inflows			Discount factor @12%	PV
	Principal	Interest income 7%	Interest income 4%		
31-Dec-20X3	200,000	-	16,000	0.8929	192,857
31-Dec-20X4	200,000	-	8,000	0.7972	165,816
Total (revised carrying value)					358,673
Less: Current carrying value					525,601
Adjustment required					166,928

The difference between the amount of pre-payment and adjustment to loan shall be considered a gain, though will be recorded as an adjustment to pre-paid employee cost, which shall be amortised over the remaining tenure of the loan.

d. 31 December 20X2 prepayment–

Particulars	Dr. Amount (₹)	Cr. Amount (₹)
Bank A/c Dr. To Pre-paid employee cost A/c To Loan to employee A/c (Being gain to Wheel Co. Limited recorded as an adjustment to pre-paid employee cost)	200,000	33,072 166,928

The amortisation schedule of the new carrying amount of loan shall be as follows:

Date	Loan outstanding	Total cash inflows (principal repayment + interest)	Interest @ 12%
31-Dec-20X2	358,673		
31-Dec-20X3	185,714	216,000	43,041
31-Dec-20X4	-	208,000	22,286

Amortisation of employee benefit cost shall be as follows:

Date	Balance	Amortised to P&L	Adjustment
1-Jan-20X1	156,121		
31-Dec-20X1	124,897	31,224	
31-Dec-20X2	60,601	31,224	33,072
31-Dec-20X3	30,300	30,300	
31-Dec-20X4	-	30,300	

e. 31 December 20X3 –

Particulars	Dr. Amount (₹)	Cr. Amount (₹)
Bank A/c Dr. To Interest income (profit and loss) @12% A/c To Loan to employee A/c (Being third instalment of repayment of loan accounted for using the amortised cost and effective interest rate of 12%)	216,000	43,041 172,959
Employee benefit (profit and loss) A/c Dr. To Pre-paid employee cost A/c (Being amortization of pre-paid employee cost charged to profit and loss as employee benefit cost)	30,300	30,300

f. 31 December 20X4 –

Particulars	Dr. Amount (₹)	Cr. Amount (₹)
Bank A/c Dr. To Interest income (profit and loss) @12% A/c To Loan to employee A/c (Being last instalment of repayment of loan accounted for using the amortised cost and effective interest rate of 12%)	208,000	22,286 185,714

Employee benefit (profit and loss) A/c	Dr.	30,300	
To Pre-paid employee cost A/c			30,300
(Being amortization of pre-paid employee cost charged to profit and loss as employee benefit cost)			

3. On the date of initial recognition, the effective interest rate of the loan shall be computed keeping in view the contractual cash flows and upfront processing fee paid. The following table shows the amortisation of loan based on effective interest rate:

Date	Cash flows (principal)	Cash flows (interest and fee)	Amortised cost (opening + interest – cash flows)	Interest @ EIR (11.50%)
1-Jan-20X1	(500,000,000)	5,870,096	494,129,904	
31-Dec-20X1	100,000,000	55,000,000	395,954,843	56,824,939
31-Dec-20X2	100,000,000	44,000,000	297,489,650	45,534,807
31-Dec-20X3	100,000,000	33,000,000	198,700,959	34,211,310
31-Dec-20X4	100,000,000	22,000,000	99,551,570	22,850,610
31-Dec-20X5	100,000,000	11,000,000	(0)	11,448,430

a. 1 January 20X1 –

Particulars	Dr. Amount (₹)	Cr. Amount (₹)
Bank A/c	Dr.	494,129,904
To Loan from bank A/c		494,129,904
(Being loan recorded at its fair value less transaction costs on the initial recognition date)		

b. 31 December 20X1 –

Particulars	Dr. Amount (₹)	Cr. Amount (₹)
Loan from bank A/c	Dr.	98,175,061
Interest expense (profit and loss)	Dr.	56,824,939
To Bank A/c		155,000,000
(Being first instalment of loan and payment of interest accounted for as an adjustment to the amortised cost of loan)		

c. 31 December 20X2 – Before Wheel Co. Limited approached the bank –

Particulars	Dr. Amount (₹)	Cr. Amount (₹)
Interest expense (profit and loss) Dr.	45,534,807	
To Loan from bank A/c		1,534,807
To Bank A/c		44,000,000
(Being loan payment of interest recorded by the Company before it approached the Bank for deferment of principal)		

Upon receiving the new terms of the loan, Wheel Co. Limited, re-computed the carrying value of the loan by discounting the new cash flows with the original effective interest rate and comparing the same with the current carrying value of the loan. As per requirements of Ind AS 109, any change of more than 10% shall be considered a substantial modification, resulting in fresh accounting for the new loan:

Date	Cash flows (principal)	Interest outflow @15%	Discount factor	PV of cash flows
31-Dec-20X2	(400,000,000)			
31-Dec-20X3	40,000,000	60,000,000	0.8969	89,686,099
31-Dec-20X4	40,000,000	54,000,000	0.8044	75,609,805
31-Dec-20X5	40,000,000	48,000,000	0.7214	63,483,092
31-Dec-20X6	40,000,000	42,000,000	0.6470	53,053,542
31-Dec-20X7	40,000,000	36,000,000	0.5803	44,100,068
31-Dec-20X8	40,000,000	30,000,000	0.5204	36,429,133
31-Dec-20X9	40,000,000	24,000,000	0.4667	29,871,422
31-Dec-20Y0	40,000,000	18,000,000	0.4186	24,278,903
31-Dec-20Y1	40,000,000	12,000,000	0.3754	19,522,235
31-Dec-20Y3	40,000,000	6,000,000	0.3367	15,488,493
PV of new contractual cash flows discounted at 11.50%				451,522,791
Carrying amount of loan				397,489,650
Difference				54,033,141
Percentage of carrying amount				13.59%

Note: Calculation done above is on full decimal, though in the table discount factor is limited to 4 decimals.

Considering a more than 10% change in PV of cash flows compared to the carrying value of the loan, the existing loan shall be considered to have been extinguished and the new loan shall be accounted for as a separate financial liability. The accounting entries for the same are included below:

d. 31 December 20X2 – accounting for extinguishment

Particulars	Dr. Amount (₹)	Cr. Amount (₹)
Loan from bank (old) A/c Dr.	397,489,650	
Loss on modification of loan (profit and loss) Dr.	2,510,350	
To Loan from bank (new) A/c		400,000,000
(Being new loan accounted for at its principal amount in absence of any transaction costs directly related to such loan and correspondingly a de-recognition of existing loan)		

e. 31 December 20X3

Particulars	Dr. Amount (₹)	Cr. Amount (₹)
Loan from bank A/c Dr.	40,000,000	
Interest expense (profit and loss) Dr.	60,000,000	
To Bank A/c		100,000,000
(Being first instalment of the new loan and payment of interest accounted for as an adjustment to the amortised cost of loan)		

4. Computation of debt component of convertible debentures on 01 April 20X1

Particulars	Amount
Present value of principal amount repayable after 4 years	
(A) $5,000,000 \times 50\% \times 1.10 \times 0.68$ (10% discount factor)	1,870,000
(B) Present value of interest $[300,000 \times 3.17]$ (4 years cumulative 10% discount factor)	951,000
Total present value of debt component (A) + (B)	2,821,000
Issue proceeds from convertible debentures	5,000,000
Value of equity component	2,179,000

Journal entry at initial recognition

Particulars	Dr. Amount (₹)	Cr. Amount (₹)
Bank A/c Dr.	5,000,000	
To 6% debenture A/c (liability component)		2,821,000
To 6% debenture A/c (equity component)		2,179,000
(Being disbursement recorded at fair value)		

5. **Step 1** There is an 'option' to convert the loans into equity i.e. the loan note holders do not have to accept equity shares; they could demand repayment in the form of cash.

Ind AS 32 states that where there is an obligation to transfer economic benefits there should be a liability recognised. On the other hand, where there is not an obligation to transfer economic benefits, a financial instrument should be recognised as equity.

In the above illustration we have both – 'equity' and 'debt' features in the instrument. There is an obligation to pay cash – i.e. interest at 8% per annum and a redemption amount – this is 'financial liability' or 'debt component'. The 'equity' part of the transaction is the option to convert. So it is a compound financial instrument.

Step 2 Debt element of the financial instrument so as to recognise the liability is the present value of interest and principal

The rate at which the same is to be discounted, is the rate of *equivalent* loan note *without* the conversion option would have carried interest at 10%, therefore this is the rate to be used for discounting

Step 3 Calculation of the debt element of the loan note as follows:

8% Interest discounted at a rate of 10% Present Value (6,00,000 x 8%)

S. No	Year	Interest amount	PVF	Amount
Year 1	20X2	48,000	0.91	43,680
Year 2	20X3	48,000	0.83	39,840
Year 3	20X4	48,000	0.75	<u>36,063</u>
				1,19,583
Year 4	20X5	648,000	0.68	<u>4,40,640</u>
Amount to be recognised as a liability				5,60,223

Initial proceeds (6,00,000)

Amount to be recognised as equity **39,777**

* In year 4, the loan note is redeemed therefore ₹ 6,00,000 + ₹ 48,000 = ₹ 6,48,000.

Step 4 The next step is to recognise the interest component equivalent to the loan that would carry if there was no option to cover. Therefore, the interest should be recognised at 10%. As on date ₹ 48,000 has been recognised in the statement of profit and loss i.e. $6,00,000 \times 8\%$ but we have discounted the present value of future interest payments and redemption amount using discount factors of 10%, so the finance charge in the statement of profit and loss must also be recognised at the same rate i.e. for the purpose of consistency.

The additional charge to be recognised in the income statement is calculated as:

Debt component of the financial instrument ₹ 5,60,000

Interest charge ($5,60,000 \times 10\%$)	₹ 56,000
Already charged to the income statement	<u>(₹ 48,000)</u>
Additional charge required	<u>₹ 8,000</u>

Journal Entries for recording additional finance cost for year ended 31 March 20X2

Particulars	Dr. Amount (₹)	Cr. Amount (₹)
Finance cost A/c Dr. To Debt component A/c (Being interest recorded for difference between amount recorded earlier and that to be recorded per Ind AS 32)	8,000	8,000

6. 1 April 20X1

A financial guarantee contract is initially recognised at fair value. The fair value of the guarantee will be the present value of the difference between the net contractual cash flows required under the loan, and the net contractual cash flows that would have been required without the guarantee.

Particulars	Year 1 (₹)	Year 2 (₹)	Year 3 (₹)	Total (₹)
Cash flows based on interest rate of 11% (A)	1,10,000	1,10,000	1,10,000	3,30,000
Cash flows based on interest rate of 8% (B)	80,000	80,000	80,000	2,40,000
Interest rate differential (A-B)	30,000	30,000	30,000	90,000
Discount factor @ 11%	0.901	0.812	0.731	
Interest rate differential discounted at 11%	27,030	24,360	21,930	<u>73,320</u>
Fair value of financial guarantee contract (at inception)				<u>73,320</u>

Journal Entry

Particulars		Debit (₹)	Credit (₹)
Investment in subsidiary	Dr.	73,320	
To Financial guarantee (liability)			73,320
(Being financial guarantee initially recorded)			

31 March 20X2

Subsequently at the end of the reporting period, financial guarantee is measured at the higher of:

- the amount of loss allowance; and
- the amount initially recognised less cumulative amortization, where appropriate.

At 31 March 20X2, there is 1% probability that Moon Limited may default on the loan in the next 12 months. If Moon Limited defaults on the loan, Sun Limited does not expect to recover any amount from Moon Limited. The 12-month expected credit losses are therefore ₹ 10,000 (Rs.10,00,000 x 1%).

The initial amount recognised less amortisation is ₹ 51,385 (₹ 73,320 + ₹ 8,065 (interest accrued based on EIR)) – ₹ 30,000 (benefit of the guarantee in year 1) Refer table below. The unwound amount is recognised as income in the books of Sun Limited, being the benefit derived by Moon Limited not defaulting on the loan during the period.

Year	Opening balance ₹	EIR @ 11%	Benefits provided ₹	Closing balance ₹
1	73,320	8,065	(30,000)	51,385
2	51,385	5,652	(30,000)	27,037
3	27,037	2,963*	(30,000)	-

* Difference is due to approximation

The carrying amount of the financial guarantee liability after amortisation is therefore ₹ 51,385, which is higher than the 12-month expected credit losses of ₹ 10,000. The liability is therefore adjusted to ₹ 51,385 (the higher of the two amounts) as follows:

Particulars		Debit (₹)	Credit (₹)
Financial guarantee (liability)	Dr.	21,935	
To Profit or loss			21,935
(Being financial guarantee subsequently adjusted)			

31 March 20X3

At 31 March 20X3, there is 3% probability that Moon Limited will default on the loan in the next 12 months. If Moon Limited defaults on the loan, Sun Limited does not expect to recover any amount from Moon Limited. The 12-month expected credit losses are therefore ₹ 30,000 (₹ 10,00,000 x 3%).

The initial amount recognised less accumulated amortisation is ₹ 27,037, which is lower than the 12-month expected credit losses (₹ 30,000). The liability is therefore adjusted to ₹ 30,000 (the higher of the two amounts) as follows:

Particulars	Debit (₹)	Credit (₹)
Financial guarantee (liability) Dr.	21,385*	
To Profit or loss (Note)		21,385
(Being financial guarantee subsequently adjusted)		

* The carrying amount at the end of 31 March 20X2 = ₹ 51,385 less 12-month expected credit losses of ₹ 30,000.

