AS 28 Impairment of Assets

Question 1

Wow Ltd. is developing a new production process. During the financial year ending 31st March, 2018, the total expenditure incurred was Rs. 50 lakhs. This process met the criteria for recognition as an intangible asset on 1st December, 2017. Expenditure incurred till this date was Rs.22 lakhs. Further expenditure incurred on the process for the financial year ending 31st March, 2019 was Rs. 80 lakhs. As at 31st March, 2019, the recoverable amount of know-how embodied in the process is estimated to be Rs. 72 lakhs. This includes estimates of future cash outflows as well as inflows.

You are required to calculate:

i. Amount to be charged to Profit and Loss A/c for the year ending 31st March, 2018 and carrying value of intangible as on that date.

ii. Amount to be charged to Profit and Loss A/c and carrying value of intangible as on 31st March, 2019. Ignore depreciation. ***(MTP Oct 18 4 Marks)***

Answer 1

As per AS 26 'Intangible Assets'

(i) *For the year ending 31.03.2018*

(1) Carrying value of intangible as on 31.03.2018:

At the end of financial year 31st March 2018, the production process will be recognized (i.e. carrying amount) as an intangible asset at a cost of Rs. 28 lakhs (expenditure incurred since the date the recognition criteria were met, i.e., from 1st December 2017).

(2) Expenditure to be charged to Profit and Loss account:

The Rs. 22 lakhs are recognized as an expense because the recognition criteria were not met until 1st December 2018. This expenditure will not form part of the cost of the production process recognized in the balance sheet.

(ii) *For the year ending 31.03.2019*

(1) Expenditure to be charged to Profit and Loss account:

	(Rs. in lakhs)
Carrying Amount as on 31.03.2018	*28*
Expenditure during 2018 –2019	*80*
Total book cost	*108*
Recoverable Amount	*(72)*
Impairment loss	*36*

Rs. 36 lakhs to be charged to Profit and loss account for the year ending 31.03.2019.

(2) Carrying value of intangible as on 31.03.2019:

	(Rs.in lakhs)
Total Book Cost	*108*

Less: Impairment loss	*(36)*
Carrying amount as on 31.03.2019	*72*

Question 2

H Ltd. which is in a business of manufacturing and export of its product. Sometimes, back in 2018, the Government put restriction on export of goods exported by H Ltd. and due to that restriction H Ltd. impaired its assets. H Ltd. acquired identifiable assets worth of Rs. 4,000 lakhs for Rs. 6,000 lakhs at the end of the year 2014. The difference is treated as goodwill. The useful life of identifiable assets is 15 years and depreciated on straight line basis. When Government put the restriction at the end of 2018, the company recognised the impairment loss by determining the recoverable amount of assets for Rs. 2,720 lakh. In 2020 Government lifted the restriction imposed on the export and due to this favourable change, H Ltd. re-estimate recoverable amount, which was estimated at Rs. 3,420 lakhs.

Required:

(i) Calculation and allocation of impairment loss in 2018.

(ii) Reversal of impairment loss and its allocation as per AS 28 in 2020. ***(RTP Nov 20)***

Answer 2

(i) Calculation and allocation of impairment loss in 2018(Amount in Rs. lakh)

	Goodwill	***Identifiable assets***	***Total***
Historical cost	*2,000*	*4,000*	*6,000*
Accumulated depreciation/amortization (4 yrs.)	*(1,600)*	*(1,067)*	*(2,667)*
Carrying amount before impairment	*400*	*2,933*	*3,333*
*Impairment loss**	*(400)*	*(213)*	*(613)*
Carrying amount after impairment loss	*0*	*2,720*	*2,720*

Notes:

1. *As per para 87 of AS 28, an impairment loss should be allocated to reduce the carrying amount of the assets of the unit in the following order:*

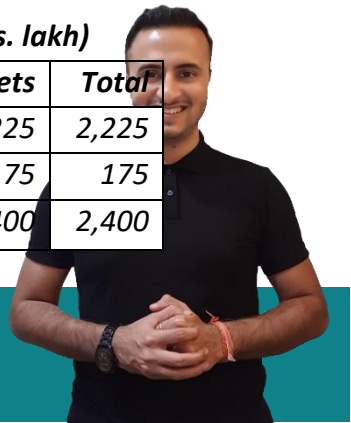
(a) first, to goodwill allocated to the cash-generating unit (if any); and

(b) then, to the other assets of the unit on a pro-rata basis based on the carrying amount of each asset in the unit. Hence, first goodwill is impaired at full value and then identifiable assets are impaired to arrive at recoverable value.

2. *Since the goodwill has arisen on acquisition of assets, AS 14 comes into the picture. As per para 19 of AS 14, goodwill shall amortize over a period not exceeding five years unless a somewhat longer period can be justified. Therefore, the amortization period of goodwill is considered as 5 years.*

(ii)Carrying amount of the assets at the end of 2020 ***(Amount in Rs. lakh)***

End of 2020	***Goodwill***	***Identifiable assets***	***Total***
Carrying amount in 2020	*0*	*2,225*	*2,225*
Add: Reversal of impairment loss (W.N.2)	*-*	*175*	*175*
Carrying amount after reversal of impairment loss	*-*	*2,400*	*2,400*



Working Note:

1. Calculation of depreciation after impairment till 2020 and reversal of impairment loss in 2020

			(Amount in Rs. lakh)
	Goodwill	***Identifiable assets***	***Total***
Carrying amount after impairment loss in 2018	*0*	*2,720*	*2,720*
Additional depreciation (i.e. (2,720/11) x 2)	*–*	*(495)*	*(495)*
Carrying amount	*0*	*2,225*	*2,225*
Recoverable amount			*3,420*
Excess of recoverable amount over carrying amount			*1,195*

Note: *It is assumed that the restriction by the Government has been lifted at the end of the year 2020.*

2. *Determination of the amount to be impaired by calculating depreciated historical cost of the identifiable assets without impairment at the end of 2020*

(Amount in Rs. lakh)

End of 2020	***Identifiable assets***
Historical cost	*4,000*
Accumulated depreciation	*(266.67 x 6 years) = (1,600)*
Depreciated historical cost	*2,400*
Carrying amount (in W.N.1)	*2,225*
Amount of reversal of impairment loss	*175*

Notes:

1. As per para 107 of AS 28, in allocating a reversal of an impairment loss for a cash-generating unit, the carrying amount of an asset should not be increased above the lower of:

(a) its recoverable amount (if determinable); and

(b) the carrying amount that would have been determined (net of amortisation or depreciation) had no impairment loss been recognised for the asset in prior accounting periods.

Hence impairment loss reversal is restricted to Rs. 175 lakh only.

2. The reversal of impairment loss took place in the 6th year. However, goodwill is amortised in 5 years. Therefore, there would be no balance in the goodwill account in the 6th year even without impairment loss. Hence in W.N. 2 above there is no column for recalculation of goodwill.

Question 3

A publisher owns 150 magazine titles of which 70 were purchased and 80 were self - created. The price paid for a purchased magazine title is recognised as an intangible asset. The costs of creating magazine titles and maintaining the existing titles are recognised as an expense when incurred. Cash inflows from direct sales and advertising are identifiable for each magazine title. Titles are managed by customer segments. The level of advertising income for a magazine title depends on the range of titles in the customer segment to which the magazine title relates. Management has a policy to abandon old titles before the end of their economic lives and replace them immediately with new titles for the same customer segment.

What is the cash-generating unit as per AS 28? ***(RTP May 20)(New SM)***

Answer 3

It is likely that the recoverable amount of an individual magazine title can be assessed. Even though the level of advertising income for a title is influenced, to a certain extent, by the other titles in the customer segment, cash inflows from direct sales and advertising are identifiable for each title. In addition, although titles are managed by customer segments, decisions to abandon titles are made on an individual title basis.

Therefore, it is likely that individual magazine titles generate cash inflows that are largely independent one from another and that each magazine title is a separate cash-generating unit.

Question 4

M Ltd. has three cash-generating units: A, B and C. Due to adverse changes in the technological environment, M Ltd. conducted impairment tests of each of its cash- generating units. On 31st March, 2018, the carrying amounts of A, B and C are Rs. 100 lakhs, Rs. 150 lakhs and Rs. 200 lakhs respectively.

The operations are conducted from a headquarter. The carrying amount of the headquarter assets is Rs. 200 lakhs: a headquarter building of Rs. 150 lakhs and a research centre of Rs. 50 lakhs. The relative carrying amounts of the cash-generating units are a reasonable indication of the proportion of the head-quarter building devoted to each cash-generating unit. The carrying amount of the research centre cannot be allocated on a reasonable basis to the individual cash-generating units.

Following is the remaining estimated useful life of:

	A	B	C	Head quarter assets
Remaining estimated useful life	10	20	20	20

The headquarter assets are depreciated on a straight-line basis.

The recoverable amount of each cash generating unit is based on its value in use sincenet selling price for each CGU cannot be calculated. Therefore, Value in use is equal to

	A	B	C	M Ltd. as a whole
Recoverable amount	199	164	271	720*

****The research centre generates additional future cash flows for the enterprise as a whole. Therefore, the sum of the value in use of each individual CGU is less than the value in use of the business as a whole. The additional cash flows are not attributable to the headquarter building.***

Calculate and show allocation of impairment loss as per AS 28. Ignore tax effects. ***(RTP Nov 18)***

Answer 4

1. Identification of Corporate Assets of M Ltd.

Here, the corporate assets are the headquarter building and the research centre. For corporate building Since, the carrying amount of the headquarter building can be allocated on a reasonable and consistent basis to the cash-generating units under review. Therefore, only a bottom-up to test is necessary.

For research centre

Since the carrying amount of the research centre cannot be allocated on a reasonable and consistent basis to the individual CGU under review. Therefore, a to top-down to test will be applied in addition to the to bottom-up to test.

2. Allocation of Corporate Assets

Since the estimated remaining useful life of A's CGU is 10 years, whereas the estimated remaining useful lives of B and C's CGU are 20 years, the carrying amount of the headquarter building is allocated to the carrying amount of each individual cash-generating unit on weight basis.

3. Calculation of a weighted allocation of the carrying amount of the headquarter building (Amount in Rs. lakhs)

On 31st March, 2018	***A***	***B***	***C***	***Total***
Carrying amount ***(A)***	*100*	*150*	*200*	*450*
Useful life	*10 years*	*20 years*	*20 years*	
Weight based on useful life	*1*	*2*	*2*	
Carrying amount after weight	*100*	*300*	*400*	*800*
Pro-rata allocation of the building	*12.5%*	*37.5%*	*50%*	*100%*
	(100/800)	*(300/800)*	*(400/800)*	
Allocation of the carrying amount of the building (based on pro-rata above) ***(B)***	*18.75*	*56.25*	*75*	*150*
Carrying amount (after allocation of the building)	*118.75*	*206.25*	*275*	*600*

1. Calculation of Impairment Losses

a. Application of to bottom-up to test ***(Amount in Rs. lakhs)***

31st March, 2018	***A***	***B***	***C***
Carrying amount (after allocation of the building) (Refer point 3 above)	*118.75*	*206.25*	*275*
Recoverable amount (given in the question)	*199*	*164*	*271*
Impairment loss	*0*	*(42)*	*(4)*

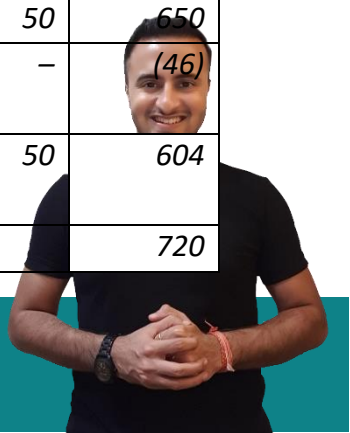
Allocation of the impairment losses for cash-generating units B and C (Amount in Rs. lakhs)

Cash-generating unit	***B***	***C***
To headquarter building	*(12) (42*56/206)*	*(1) (4*75/275)*
To assets in cash-generating unit	*(30) (42*150/206)*	*(3) (4*200/275)*
	(42)	*(4)*

Since the research centre could not be allocated on a reasonable and consistent basis to A, B and C₹s CGU, M Ltd. compares the carrying amount of the smallest CGU to which the carrying amount of the research centre can be allocated (i.e.,M as a whole) to its recoverable amount, in accordance with the ₹top-down₹ test.

Application of the to top-down to test (Amount in Rs. lakhs)

31st March, 2018	***A***	***B***	***C***	***Building***	***Research Centre***	***M Ltd.***
Carrying amount	*100*	*150*	*200*	*150*	*50*	*650*
Impairment loss arising from the two bottom-up to test	*–*	*(30)*	*(3)*	*(13)*	*–*	*(46)*
Carrying amount after the ₹bottom-up₹ test	*100*	*120*	*197*	*137*	*50*	*604*
Recoverable amount						*720*



Since recoverable amount is more than the carrying amount of M Ltd., no additional impairment loss has been resulted from the application of the top- down test. Only an impairment loss of Rs. 46 lakhs will be recognized as a result of the application of the to bottom-up to test.

Question 5

M Ltd. produces a single product and owns plants A, B and C. Each plant is located in a different continent. Plant A produces a component that is assembled in either plant B or plant C. The combined capacity of plants B and C is not fully utilised. M Ltd.'s products are sold world-wide from either plants B or C i.e. plant B₹s production can be sold in plant C's continent if the products can be delivered faster from plant B than from plant C. Utilisation levels of plant B and plant C depend on the allocation of sales between the two sites.

For each of the following cases, what are the cash-generating units for plants A, Band C?

Case 1:There is an active market for plant A₹s products.

Case 2:There is no active market for plant A₹s products. ***(RTP May 18)***

Answer 5

Case 1: *It is likely that A is a separate cash-generating unit because there is an active market for its products. Although there is an active market for the products assembled by B and C, cashinflows for B and C depend on the allocation of production across the two sites. It is unlikely that the future cash inflows for B and C can be determined individually. Therefore, it is likely that B and C together is the smallest identifiable group of assets that generates cash inflows from continuing use that are largely independent.*

In determining the value in use of A and B plus C, M Ltd. adjusts financial budgets/forecasts to reflect its best estimate of future market prices forA₹s products.

Case 2: *It is likely that the recoverable amount of each plant cannot be assessed independently because:*

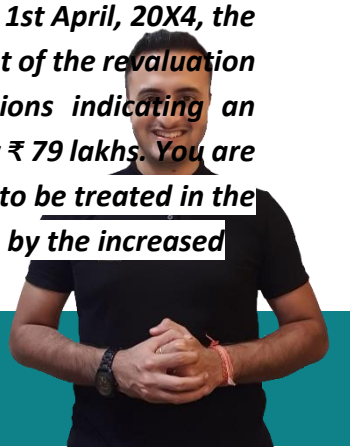
(a) there is no active market for A's products. Therefore, A's cash inflows depend on sales of the final product by B and C; and

(b) although there is an active market for the products assembled by B and C, cash inflows for B and C depend on the allocation of production across the two sites. It is unlikely that the future cash inflows for B and C can be determined individually.

As a consequence, it is likely that A, B and C together (i.e., M Ltd. as a whole) is the smallest identifiable group of assets that generates cash inflows from continuing use that are largely independent.

Question 6

G Ltd., acquired a machine on 1st April, 20X0 for ₹ 7 crore that had an estimated useful life of 7 years. The machine is depreciated on straight line basis and does not carry any residual value. On 1st April, 20X4, the carrying value of the machine was reassessed at ₹ 5.10 crore and the surplus arising out of the revaluation being credited to revaluation reserve. For the year ended March, 20X6, conditions indicating an impairment of the machine existed and the amount recoverable ascertained to be only ₹ 79 lakhs. You are required to calculate the loss on impairment of the machine and show how this loss is to be treated in the books of G Ltd. G Ltd., had followed the policy of writing down the revaluation surplus by the increased



charge of depreciation resulting from the revaluation.

(New SM) (PYP 5 Marks May '18) (MTP 4 Marks Oct '17)

Answer 6

Statement Showing Impairment Loss

	(₹ in crores)
Carrying amount of the machine as on 1st April, 20X0	*7.00*
Depreciation for 4 years i.e. 20X0-20X1 to 20X3-20X	
7 Crores /7 Years × 4 years	*(4.00)*
Carrying amount as on 31.03.20X4	*3.00*
Add: Upward Revaluation (credited to Revaluation Reserve account)	*2.10*
Carrying amount of the machine as on 1st April, 20X4 (revalued)	*5.10*
Less: Depreciation for 2 years i.e. 20X4-20X5& 20X5-20X6 *5.10 Crores /3 Years× 4 years*	*(3.40)*
Carrying amount as on 31.03.20X6	*1.70*
Less: Recoverable amount	*(0.79)*
Impairment loss	*0.91*
Less: Balance in revaluation reserve as on 31.03.20X6:	
Balance in revaluation reserve as on 31.03.20X4	*2.10*
Less: Enhanced depreciation met from revaluation reserve	
20X4-20X5 & 20X5-20X6=[(1.70 – 1.00) x 2 years] (1.40)	
Impairment loss set off against revaluation reserve balance as per para 58 of AS 28 "Impairment of Assets"	*(0.70)*
Impairment Loss to be debited to profit and loss account	*0.21*

Question 7

C Ltd. acquired S Ltd. business (a cash generating unit) on 31-3-2016 for ₹ 8,000 Lakhs. The details of acquisition are us under: -

Fair value of identifiable asset	***6000 Lakhs***
Goodwill	***2000 Lakhs***

The anticipated useful life of acquired assets is 5 years Goodwill is to be amortised in 4 years C Ltd. uses straight-line method of depreciation with no residual values anticipated. On 31-3-2018, C Ltd. estimated the significant decline in production due to change in Government policies. The net selling price of identifiable asset is not determinable. The cash flow forecast based on recent financial budget for next 7 years after considering change in Govt. policies are as follows. Incremental financing cost is 8% which represent current market assessment of the time value of money.

			₹ in Crore
Year	***Cash flow***	***Year***	***Cash flow***
2019	***800***	***2022***	***600***
2020	***800***	***2023***	***600***
2021	***800***	***2024***	***500***
		2025	***400***

You are required to calculate:

(i) Value in use

(ii) Impairment loss

(iii) Revised carrying amount on 31-3-2018 ***(PYP Nov 18 5 Marks)***

Answer 7

Value in Use

Year ended on 31st March	***Cash flow (₹ in lakh)***	***Discounting factor @ 8%***	***Present Value (₹ in lakh)***
2019	*800*	*0.926*	*740.80*
2020	*800*	*0.857*	*685.60*
2021	*800*	*0.794*	*635.20*
2022	*600*	*0.735*	*441.00*
2023	*600*	*0.681*	*408.60*
2024	*500*	*0.630*	*315.00*
2025	*400*	*0.583*	*233.20*
			3459.40

Impairment loss

Impairment loss = Carrying amount of the asset - Recoverable Amount

= ₹ 4,600 lakhs - ₹ 3,459.40 lakhs (Refer W.N.)

= ₹ 1,140.60 lakhs

Revised Carrying Amount on 31.3.2018

As per para 87 of AS 28 'Impairment of Assets', an impairment loss should be allocated to reduce the carrying amount of the assets of CGU in the following order:

(a) first, to goodwill allocated to the cash-generating unit (if any); and

(b) then, to the other assets of the unit on a pro-rata basis based on the carrying amount of each asset in the unit.

Hence, first goodwill is impaired at full value and then identifiable assets are impaired to arrive at recoverable value.

(₹ in lakh)

	Goodwill	***Identifiable assets***	***Total***
Useful life	*4 years*	*5 years*	
Historical cost	*2,000*	*6,000*	*8,000*
Accumulated depreciation/amortization (for 2 years)	*(1,000)*	*(2,400)*	*(3,400)*
Carrying amount before impairment	*1,000*	*3,600*	*4,600*
Impairment loss	*(1,000)*	*(140.60)*	*(1,140.60)*
Revised carrying amount after impairment loss	*0*	*3,459.40*	*3,459.40*

Working Note:

Calculation of Recoverable Amount

Recoverable amount = Higher of Asset's Net Selling Price or Value in Use Where, Asset's net selling price is not determinable Recoverable Amount of the asset will be equal to the Value in use ie. ₹ 3,459.40 lakh.

Question 8

Himalaya Ltd. which is in a business of manufacturing and export of its product. Sometimes, back in 2014, the Government put restriction on export of goods exported by Himalaya Ltd. and due to that restriction Himalaya Ltd. impaired its assets. Himalaya Ltd. acquired identifiable assets worth of ₹ 4,000 lakhs for ₹ 6,000 lakh at the end of the year 2010. The difference is treated as goodwill. The useful life of identifiable assets is 15 years and depreciated on straight line basis. When Government put the restriction at the end of 2014, the company recognised the impairment loss by determining the recoverable amount of assets for ₹ 2,720 lakh. In 2016 Government lifted the restriction imposed on the export and due to this favourable change, Himalaya Ltd. re-estimate recoverable amount, which was estimated at ₹ 3,420 lakh.

Required:

(i) Calculation and allocation of impairment loss in 2014.

(ii) Reversal of impairment loss and its allocation as per AS 28 in 2016. ***(PYP Nov 17)***

Answer 8

Calculation and allocation of impairment loss in 2014 (Amount in ₹ lakhs)

	Goodwill	Identifiable assets	Total
Historical cost	*2,000*	*4,000*	*6,000*
Accumulated depreciation/amortization (4 yrs.)	*(1,600)*	*(1,067)*	*(2,667)*
Carrying amount before impairment	*400*	*2,933*	*3,333*
*Impairment loss**	*(400)*	*(213)*	*(613)*
Carrying amount after impairment loss	*0*	*2,720*	*2,720*

**** Notes:***

1. *As per para 87 of AS 28, an impairment loss should be allocated to reduce the carrying amount of the assets of the unit in the following order:*

(a) first, to goodwill allocated to the cash-generating unit (if any); and

(b) then, to the other assets of the unit on a pro-rata basis based on the carrying amount of each asset in the unit.

Hence, first goodwill is impaired at full value and then identifiable assets are impaired to arrive at recoverable value.

2. *Since the goodwill has arisen on acquisition of assets, AS 14 comes into the picture. As per para 19 of AS 14, goodwill shall amortise over a period not exceeding five years unless a somewhat longer period can be justified. Therefore, the amortization period of goodwill is considered as 5 years.*

Carrying amount of the assets at the end of 2016 (Amount in ₹ lakhs)

End of 2016	Goodwill	Identifiable assets	Total
Carrying amount in 2016	*0*	*2,225*	*2,225*
Add: Reversal of impairment loss (W.N.2)	*-*	*175*	*175*
Carrying amount after reversal of impairment loss	*-*	*2,400*	*2,400*

Working Note:

Calculation of depreciation after impairment till 2016 and reversal of impairment loss in 2016

			(Amount in ₹ lakhs)
	Goodwill	***Identifiable assets***	***Total***
Carrying amount after impairment loss in 2014	*0*	*2,720*	*2,720*
Additional depreciation (i.e. (2,720/11) x 2)	*–*	*(495)*	*(495)*
Carrying amount	*0*	*2,225*	*2,225*
Recoverable amount			*3,420*
Excess of recoverable amount over carrying amount			*1,195*

Note: *It is assumed that the restriction by the Government has been lifted atthe end of the year 2016.*

Determination of the amount to be impaired by calculating depreciated historical cost of the identifiable assets without impairment at the end of 2016

(Amount in ₹ lakhs)

End of 2016	***Identifiable assets***
Historical cost	*4,000*
Accumulated depreciation	*(266.67 x 6 years) = (1,600)*
Depreciated historical cost	*2,400*
Carrying amount (in W.N. 1)	*2,225*
Amount of reversal of impairment loss	*175*

Notes:

1. *As per para 107 of AS 28, in allocating a reversal of an impairment loss for a cash-generating unit, the carrying amount of an asset should not be increased above the lower of:*

(a) *its recoverable amount (if determinable); and*

(b) *the carrying amount that would have been determined (net of amortisation or depreciation) had no impairment loss been recognized for the asset in prior accounting periods.*

Hence impairment loss reversal is restricted to ₹175 lakhs only.

2. *The reversal of impairment loss took place in the 6th year. However, goodwill is amortised in 5 years. Therefore, there would be no balance inthe goodwill account in the 6th year even without impairment loss. Hence in W.N. 2 above there is no column for recalculation of goodwill.*