

2. ACCOUNTING FOR EMPLOYEE STOCK OPTION PLAN

ASSIGNMENT SOLUTIONS

PROBLEM NO: 1

- i) Value of options = $1,250 \times (\text{Rs.}200 - \text{Rs.}80) = \text{Rs.}1,50,000$
 ii) Amount to be recognised = $\text{Rs.}1,50,000 / 3 = \text{Rs.}50,000$ each year.

In the books of HCL

Journal

Date	Particulars	L.F.	Dr. (Rs.)	Cr. (Rs.)
31 st March, 2013	Employee Compensation Expense A/c Dr. To Employee stock option outstanding A/c (Being expenses in respect of ESOP recognised for the year 1)		50,000	50,000
31 st March, 2013	P & L A/c Dr. To Employee Compensation Expenses A/c (Being Employee Compensation Expenses for the year transfer to P&L A/c)		50,000	50,000
31 st March, 2014	Employee Compensation Expense A/c Dr. To Employee stock option outstanding A/c (Being expenses in respect of ESOP recognised for the year-2)		50,000	50,000
31 st March, 2014	P & L A/c Dr. To Employee Compensation Expenses A/c (Being Employee Compensation Expenses for the year transfer to P&L A/c)		50,000	50,000
31 st March, 2015	Employee Stock Options Outstanding A/c Dr. To General reserve A/c (Being the reversal of compensation accounting on lapse of 450 options)		36,000	36,000
31 st March, 2015	Employee Compensation Expense A/c Dr. To Employee stock option outstanding A/c (Being expenses in respect of ESOP recognised for the year-2)		32,000	32,000
31 st March, 2015	P & L A/c Dr. To Employee Compensation Expenses A/c (Being Employee Compensation Expenses for the year transfer to P&L A/c)		32,000	32,000
31 st August, 2015	Bank A/c (800 x Rs.80) A/c Dr. Employee Stock Options Outstanding A/c Dr. To Equity Share Capital A/c (800 × 10) To Securities Premium A/c (800 × 190) (Being the exercise of 800 options)		64,000 96,000	8,000 1,52,000

Dr.			Employee Stock Options Outstanding A/c			Cr.		
Date	Particulars	Rs.	Date	Particulars	Rs.			
31.03.13	To Balance c/d	50,000	31.03.13	By Employee Compensation Exp. A/c	50,000			
		50,000			50,000			
31.03.14	To Balance c/d	1,00,000	01.04.13	By Balance b/d	50,000			
			31.03.14	By Employee Compensation Exp. A/c	50,000			
		1,00,000			1,00,000			
31.03.15	To General reserve	36,000	01.04.14	By Balance b/d	1,00,000			
	To Balance c/d	96,000	31.03.15	By Employee Compensation Exp. A/c	32,000			
		1,32,000			1,32,000			
	To Equity share capital	8,000	01.04.15	By Balance b/d	96,000			
	To Securities premium	1,52,000	31.08.15	By Bank A/c	64,000			
		1,60,000			1,60,000			

DISCLOSURE IN THE BALANCE SHEET: Employee Stock Options Outstanding will appear in the Balance Sheet as part of reserves and surplus on shareholders' equity as per Schedule III.

PROBLEM NO: 2

In the Books of 'P' Ltd.

Journal Entries:

Date	Particulars	Debit (Rs.)	Credit (Rs.)
31.03.11	Employees Compensation exp. A/c Dr.	80,000	
	To Employee Stock Options o/s A/c		80,000
	(Being Compensation exp. Recognized for 6 months in respect of employees stock options on SLM basis) [8000 x (170 - 80) / 4 ½ years x 6m / 12m = 80,000]		
31.03.11	P & L A/c Dr.	80,000	
	To Employees Compensation exp. A/c		80,000
	(Being Compensation exp. Transferred to P & L A/c)		
31.03.12	Employees Compensation exp. A/c Dr.	1,60,000	
	To Employee Stock Options O/S A/c		1,60,000
	(Being Compensation exp. Recognized for the full year)		
31.03.12	P & L A/c Dr.	1,60,000	
	To Employees Compensation expenses A/c		1,60,000
	(Being Compensation expenses transferred to P & L A/c)		
31.03.13	Employees Compensation expenses A/c Dr.	80,000	
	To Employee Stock Options O/S A/c		80,000
	(Being Compensation expenses recognized in respect of 4000 options for full year) [4,000 x (170 - 80) / 4 ½ years x Full year]		
31.03.13	P & L A/c Dr.	80,000	
	To Employees Compensation expenses A/c		80,000
	(Being Compensation expenses transferred to P & L A/c)		
31.03.13	Employees Stock Options o/s A/c Dr.	1,20,000	
	To General Reserve A/c		1,20,000
	(Being excess compensation expenses transferred to General Reserve A/c) [(80,000 + 1,60,000 - 4,000) / 8,000 = 1,20,000]		
31.03.14	Employees Compensation expenses A/c Dr.	80,000	
	To Employee Stock Options O/S A/c		80,000
	(Being Compensation expenses recognized in respect of stock options of 4000)		
31.03.14	P & L A/c Dr.	80,000	
	To Employees Compensation expenses A/c		80,000
	(Being Compensation expenses transferred to P & L A/c)		
31.03.15	Employees Compensation expenses A/c Dr.	80,000	
	To Employee Stock Options O/S A/c		80,000
	(Being Compensation expenses recognized in respect of stock options of 4000)		
31.03.15	P & L A/c Dr.	80,000	
	To Employees Compensation expenses A/c		80,000
	(Being Compensation expenses transferred to P & L A/c)		
30.09.15	Bank A/c (3000 x Rs. 80) Dr.	2,40,000	
	Employees stock options O/S A/c (3000 x Rs.90)	2,70,000	
	To Equity share capital A/c (3000 x 10)		30,000
	To Securities Premium A/c (3000 x 160)		4,80,000
	(Being 3000 employees stock options exercised at an exercise price of Rs.80 each)		
30.09.15	Employees Stock Options O/s A/c Dr.	90,000	
	To General Reserve A/c		90,000
	(Being balance in ESOS transferred to General Reserve A/c)		

WORKING NOTES:

1. Fair value of each option Rs.170 - Rs.80 = Rs.90

2. Amount Transferred to General Reserve

On 01.12.2012 4,000 Unvested options $= (80,000 + 1,60,000) \times \frac{4,000}{8,000} = \text{Rs. } 1,20,000$

On 30.09.2015 1,000 Unexercised lapsed options $= 1000 \times \text{Rs. } 90 = \text{Rs. } 90,000$.

PROBLEM NO: 3

Year	Calculation	Expenses for the period (Rs.)	Cumulative expense (Rs.)
1	55,200 options \times 75% \times Rs. 12 \times 1/3 years	1,65,600	1,65,600
2	(55,200 options \times 75% \times Rs. 12 \times 2/3 years) - Rs. 1,65,600	1,65,600	3,31,200
3	(55,200 options \times 75% \times Rs. 12 \times 3/3 years) - Rs. 3,31,200	1,65,600	4,96,800

An enterprise should review all estimates taken in consideration for valuation of option. The value of options recognised as expense in an accounting period is the excess of cumulative expense as per latest estimates upto the current accounting period over total expense recognised up to the previous accounting period.

PROBLEM NO: 4Journal Entries

Date	Particulars	Debit (Rs.)	Credit (Rs.)
15.03.13	Bank A/c (9,500 \times 40) Dr.	3,80,000	
To	Employee Compensation Expenses A/c (W.N.1) Dr.	8,55,000	
31.03.13	To Equity Share Capital A/c (9,500 \times 10)		95,000
	To Securities Premium A/c (9,500 \times 120)		11,40,000
	(Being allotment to employees of 9,500 Equity Share of Rs. 10 each at a premium of Rs. 120 per share in exercise of stock options by employees)		
31.03.13	Profit & Loss A/c Dr.	8,55,000	
	To Employee Compensation expenses A/c		8,55,000
	(Being transfer of employee compensation expenses to P & L A/c)		

WORKING NOTES:

- Market Price per Share Rs.130
 Exercising price per option Rs. 40
 Intrinsic Value of each option Rs. 90
 No. of Options exercised by employees 9,500 options
 Value of Compensation expenses to be recognized $= 9,500 \times \text{Rs. } 90 = \text{Rs. } 8,55,000$.

PROBLEM NO: 5

Date	Particulars	Debit (Rs.)	Credit (Rs.)
15.03.13	Bank A/c Dr.	2,40,000	
To	Employee Compensation Expenses A/c Dr.	4,32,000	
31.03.13	To Equity Share Capital A/c		48,000
	To Securities Premium A/c		6,24,000
	(Being allotment to employees of 4,800 Equity Share of Rs. 10 each at a premium of Rs. 130 per share at an exercise price of Rs.50 each)		
31.03.13	Profit & Loss A/c Dr.	4,32,000	
	To Employee Compensation expenses A/c		4,32,000
	(Being transfer of employee compensation expenses to P & L A/c)		

Working Note:

- Employee Compensation Expenses = Discount between Market Price and option price $= \text{Rs. } 140 - \text{Rs. } 50 = \text{Rs. } 90$ per share $= \text{Rs. } 90 \times 4,800 = \text{Rs. } 4,32,000/-$ in total.
- The Employees Compensation Expense is transferred to Securities Premium Account.
- Securities Premium Account $= \text{Rs. } 50 - \text{Rs. } 10 = \text{Rs. } 40$ per share $+ \text{Rs. } 90$ per share on account of discount of option price over market price $= \text{Rs. } 130$ per share $= \text{Rs. } 130 \times 4,800 = \text{Rs. } 6,24,000/-$ in total.

PROBLEM NO: 6

Fair value of an option = Rs. 28

Difference between Fair value and Issue Price = Rs. 28 - Rs. 25 = 3.

Number of employees accepting the offer = 400 employees x 50% = 200 employees

Number of shares issued = 200 employees x 100 shares/employee = 20,000 shares

Employee Compensation Expenses recognized in 2014-15 = 20,000 shares x Rs. 3 = Rs. 60,000

Securities Premium A/c = Rs. 28 - 10 = Rs. 18 per share = 20,000 x 18 = Rs. 3,60,000

Journal Entry:

Date	Particulars	Debit (Rs.)	Credit (Rs.)
30.04.14	Bank A/c (20,000 shares X Rs.25) Dr.	5,00,000	
	Employee Compensation Expenses A/c Dr.	60,000	
	To Equity Share Capital A/c		2,00,000
	To Securities Premium A/c		3,60,000
	(Being stock purchase option accepted by 200 employees for 100 shares each at Rs.25 per share on a fair value of Rs.28 per share)		

Note: Employees compensation expenses amounting Rs. 60,000 will ultimately be charged to profit & loss account.

PROBLEM NO: 7**Journal Entries in the Books of ABC Ltd**

Date	Particulars	Debit (Rs.)	Credit (Rs.)
Year 1	Employee compensation expense A/c Dr. To Stock Options Outstanding A/c (Being compensation expense recognized in respect of the ESOP)	13,69,010	13,69,010
Year 1	Profit or loss A/c Dr. To employee compensation expenses A/c (Being compensation expenses transferred to P&L A/c)	13,69,010	13,69,010
Year 2	Employee compensation expense A/c Dr. To Stock Options Outstanding A/c (Being compensation expense recognized in respect of the ESOP)	11,22,740	11,22,740
Year 2	Profit or loss A/c Dr. To employee compensation expenses A/c (Being compensation expenses transferred to P&L A/c)	11,22,740	11,22,740
Year 3	Employee compensation expense A/c Dr. To Stock Options Outstanding A/c (Being compensation expense recognized in respect of ESOP)	12,88,250	12,88,250
Year 3	Profit or loss A/c Dr. To employee compensation expenses A/c (Being compensation expenses transferred to P&L A/c)	12,88,250	12,88,250
Year 5	Bank A/c (200 x 300 x 50) Dr. Stock Options Outstanding A/c (Rs.15) Dr. To Share Capital A/c (200 X 300 X 10) To Securities Premium A/c (Rs.55) (Being shares issued to the employees against the options vested in them in pursuance of the Employee Stock Option Plan)	30,00,000 9,00,000	6,00,000 33,00,000
Year 6	Bank A/c (600 X 300 X 50) Dr. Stock Options Outstanding A/c (@ Rs.15) Dr. To Share Capital A/c @ Rs.10 (600 X 300 X 10) To Securities Premium A/c (@ Rs.55) (Being shares issued to the employees against the options vested in them in pursuance of the Employee Stock Option Plan)	90,00,000 27,00,000	18,00,000 99,00,000
Year 6	Stock Options Outstanding A/c (40 X 300 X 15) Dr. To General Reserve (Being the balance standing to the credit of the Stock Options Outstanding Account, in respect of vested options expired unexercised, transferred to the general reserve)	1,80,000	1,80,000

Working Notes:

1. The enterprise estimates the fair value of the options expected to vest at the end of the vesting period as below:

No. of options expected to vest = $300 \times 1,000 \times 0.97 \times 0.97$, $0.97 = 2,73,802$ options

Fair value of options expected to vest = $2,73,802$ options \times Rs.15 = Rs.41,07,030

2. As the enterprise still expects actual forfeitures to average 3 per cent per year over the 3-year vesting period, therefore, it recognize Rs.41,07,030/3 towards the employee services.

3. The revised number of options expected to vest

= $2,49,175$ ($3,00,000 \times 0.94 \times 0.94 \times 0.94$)

The fair value of revised options expected to vest.

= Rs.37,37,625 ($2,49,175 \times$ Rs.15)

The expense to be recognized during the year is determined as below:

Revised total fair value Rs.37,37,625

Revised cumulative expense at the end of the year 2 (Rs.37,37,625 \times 2/3) Rs.24,91,750

Less: Expense already recognized in year 1 ($4107030 \times 1/3$) Rs.13,69,010

Expense to be recognized in year 2 Rs.11,22,740

4. The expense to be recognized during the year is determined as below:

No. of options actually vested = $840 \times 300 = 2,52,000$

Fair value of options actually vested (Rs.2,52,000 \times Rs.15) Rs.37,80,000

Expense already recognized Rs.24,91,750

Expense to be recognized in year 3 Rs.12,88,250

PROBLEM NO: 8**Calculation of ESOP cost to be amortized**

	2015-2016	2016-2017
Fair value of options per share	Rs.18	Rs.18
No. of options expected to vest under the scheme	93,000 (930×100)	88,000 (880×100)
Fair value of options	16,74,000	Rs. 15,84,000
Value of options recognized as expenses	(Rs.16,74,000 / 2) 8,37,000	(Rs.15,84,000 - Rs.8,37,000) 7,47,000

PROBLEM NO: 9

Since the exercise price varies depending on the outcome of a performance condition which is not a market condition the effect of that performance condition (i.e. the possibility that the exercise price might be Rs.40 and the possibility that the exercise price might be Rs.30) is not taken into account when estimating the fair value of the stock options at the grant date. Instead, the enterprise estimates the fair value of the stock options at the grant date under each scenario and revises the transaction amount to reflect the outcome of that performance condition at the end of every year based on the information available at that point of time.

Calculation of compensation expenses to be charged every year

Year	Calculation	Compensation expenses for the period (Rs.)	Cumulative compensation expense (Rs.)
1	$10,000$ options \times Rs. 16 \times 1/3	53,333	53,333
2	$(10,000$ options \times Rs. 16 \times 2/3) - Rs. 53,333	53,334	1,06,667
3	$(10,000$ options \times Rs. 12 \times 3/3) - Rs. 1,06,667	13,333	1,20,000

PROBLEM NO: 10

- i) Calculation of employee compensation expense for the year ended 31st March, 2015, 31st March, 2016 and 31st March, 2017 (Refer working note)

Vesting date as on 31 st March	Cost to be recognized in the year ending 31 st March		
	2015	2016	2017
2015	6,24,000		

2016	2,88,000		
2017	2,40,000		
Cost for the year	11,52,000	5,28,000	2,40,000
Cumulative cost	11,52,000	16,80,000	19,20,000

ii) Balance of ESOP Outstanding account as on 31st March, 2015, 31st March, 2016 and 31st March, 2017

	Total	2015	2016	2017
ESOP Outstanding A/c at the end of first year	11,52,000	11,52,000		
Less: Vested options lapsed during the year (200X240)	(48,000)			
Less: Vested options exercised during the year (2,500X240)	(6,00,000)			
Add: ESOP credited in the second year	5,28,000			
ESOP Outstanding A/c at the end of 2 nd year	10,32,000		10,32,000	
Less: Vested options lapsed (600X240)	(1,44,000)			
Less: Vested options exercised (2000X240)	(4,80,000)			
Add: ESOP credited in the third year	2,40,000			
ESOP Outstanding at the end of 3 rd Year	6,48,000			6,48,000

Working note:

Determination of number of options expected to vest under each group

Vesting date (Year-end) 31 st March		Shares expected to vest	Value per share (Rs.) (400-160)	Compensation expense (Rs.)
2015	(10000 shares X 30%) – 400 shares	2,600 shares	240	6,24,000
2016	(10000 shares X 30%) – 600 shares	2,400 shares	240	5,76,000
2017	(10000 shares X 40%) – 1000 shares	3,000 shares	240	7,20,000
				19,20,000

Total compensation expense of Rs.19,20,000, determined at the grant date, is attributed to 3 years.

Note: The solution can be given in the following alternative manner:

i) Calculation of Employee compensation expense for the year ended 31st March, 2015, 31st March, 2016 and 31st March, 2017

Particulars	Year ended 31.3.15	Year ended 31.3.16	Year ended 31.3.17
No. of options in vesting ratio (30%/30%/40%)	3,000	3,000	3,000
Less: Unvested options lapsed during the year	(400)	(600)	(1000)
Net options vested during the year (A)	2,600	2,400	3,000
Per option expenses (Rs. 400 – Rs.160) (B)	240	240	240
Employee compensation expense for the year (AXB)	6,24,000	5,76,000	7,20,000

ii) Balance of ESOP Outstanding Account

Particulars	As on 2015	As on 2016	As on 2017
Opening balance		6,24,000	5,52,000
Amount transferred from employee compensation expense	6,24,000	5,76,000	7,20,000
Less: Expenses of options vested and lapsed @ 240 per option (transferred to general reserve)	-	(48,000) (200X240)	(1,44,000) (600X240)
Less: Utilized for issue of shares @ 240 per option	-	(6,00,000) (2500X240)	(4,80,000) (2000X240)
Closing balance	6,24,000	5,52,000	6,48,000

Note: In the absence of estimated figures regarding lapse of unvested options, it is assumed that actual lapses were in accordance with the estimation.

THE END

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