

# AS 15 - EMPLOYEE BENEFITS

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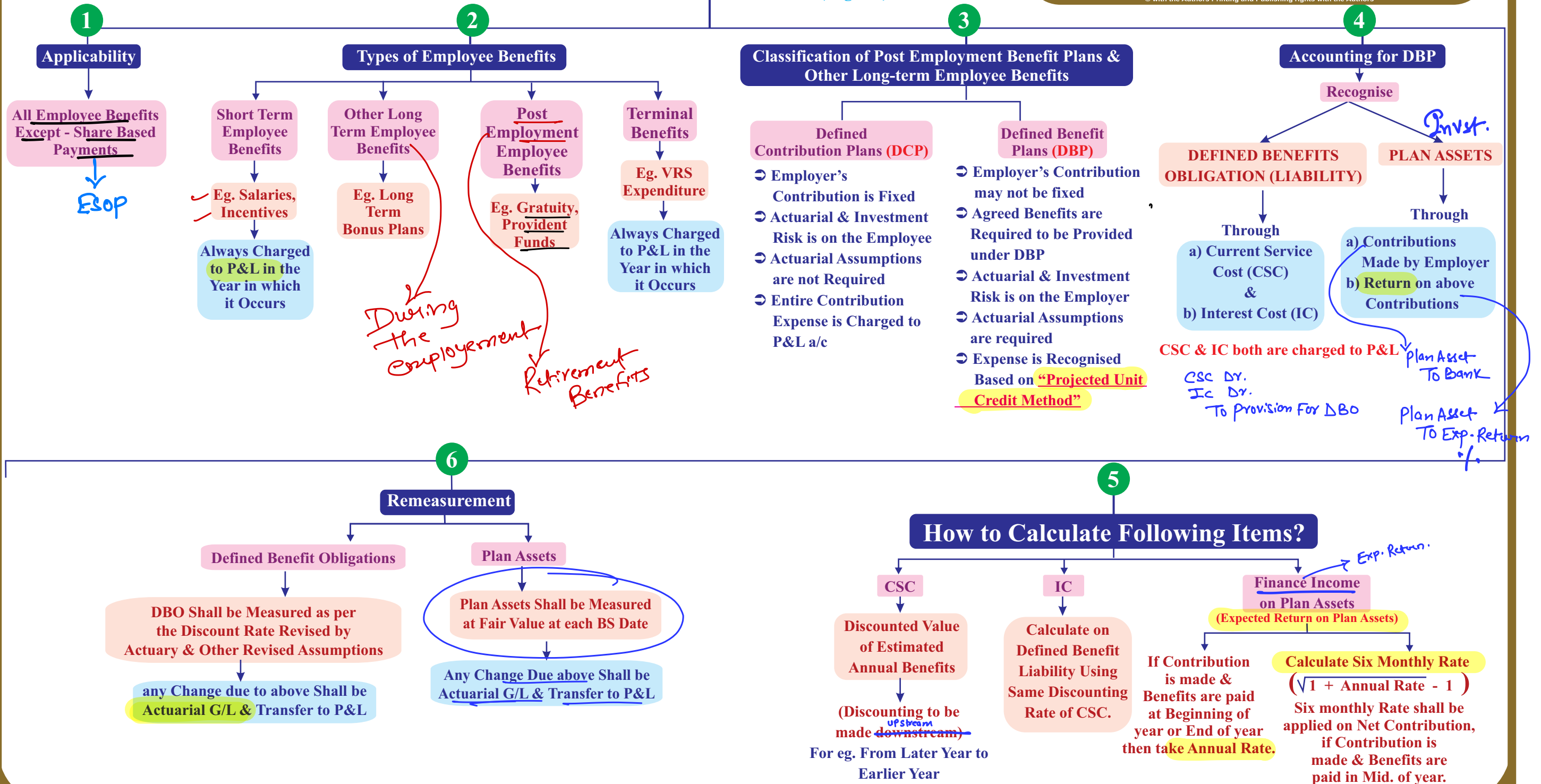
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# AS 15 - EMPLOYEE BENEFITS

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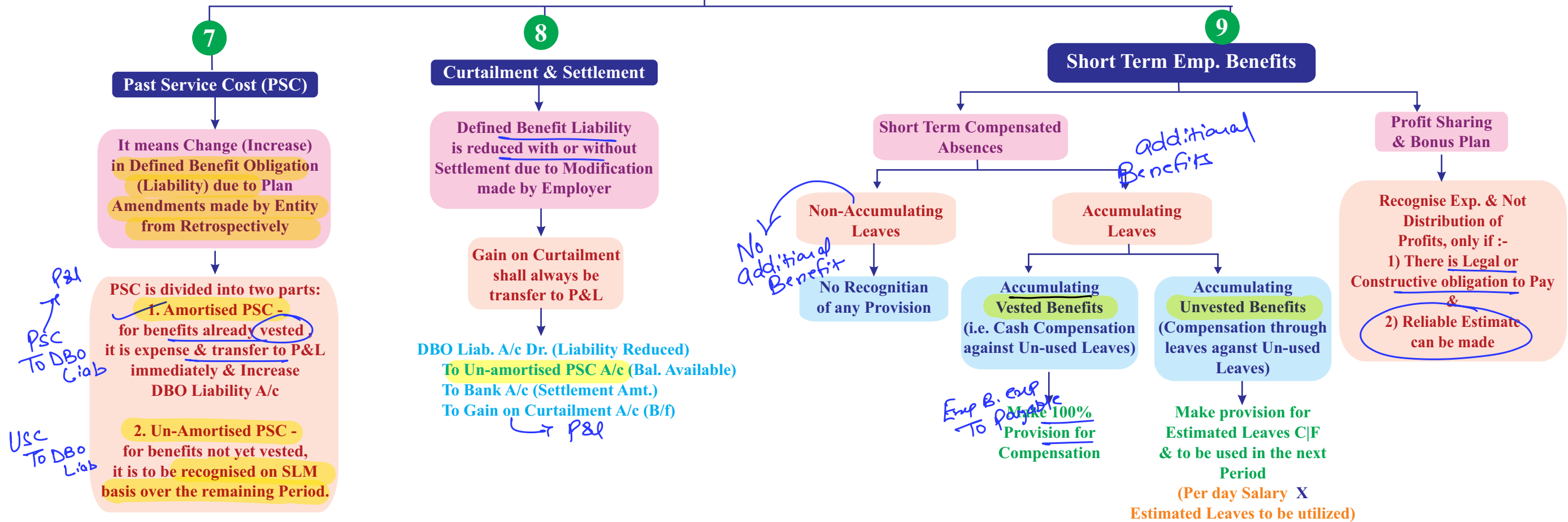
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*P&L*  
PSC To DBO Liab  
USC To DBO Liab

*No Additional Benefit*

*Additional Benefits*

## Provision For DBO A/c

|                                 |                                 |
|---------------------------------|---------------------------------|
| To Bank xxx<br>(Benefits paid)  | By Bal Hd xxx                   |
| (B/f) To Actuarial gain P&L xxx | By CSC P&L xxx                  |
|                                 | By Int. Cost xxx                |
|                                 | By PSC P&L xxx                  |
|                                 | By UAm-PSC xxx                  |
| To Bal cld xxx                  | By Actuarial Loss P&L xxx (B/f) |

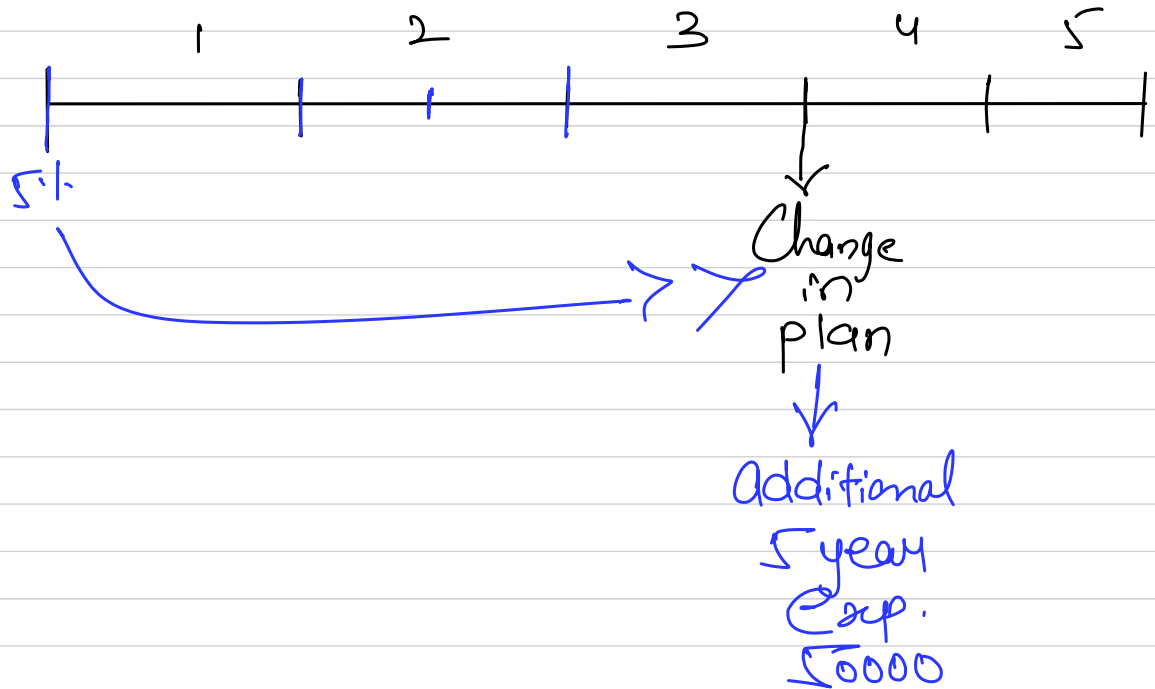
*as per Actuarial valuation*

## Plan Asset a/c

|                                   |                            |
|-----------------------------------|----------------------------|
| To Bal Hd xxx                     | By Bank xxx<br>(Benefits)  |
| To Ex-Retn xx                     | By Actuarial Loss P&L xxx  |
| To Bank xxx<br>(Contribution)     |                            |
| To Ex-Retn. xx<br>(on net Contr.) |                            |
| To Actuarial Gain P&L xxx         | By Bal cld (at fair Value) |

|                           |  |
|---------------------------|--|
| Income                    |  |
| Actual Return             |  |
| Exp Retn                  |  |
| (+) Act-Gain on P. Ass    |  |
| (-) Act-Loss on Plan Ass. |  |

Eg:-



Step 1:- Calculate Est. Total Defined Benefit to be paid (Based on Future Salary)

Step 2:- Allocated Benefit per year

$$\frac{\text{Step 1}}{\text{No. of yrs}}$$

Step 3:- Calculate CSC by Discounting each year upstream

Step 4:- Prepare Interest Schedule

OPng

Int Gst (%)

CSC

Closg

- v. any Past service cost (to the extent they are recognized);
- vi. and gain or loss on settlement (curtailment);
- vii. Any change in the effect of the Net Defined Benefit Asset.

12. Items to be shown in Balance sheet:

Net defined liability (deficit) or Net defined asset (Surplus)

13. Actuarial Assumptions comprise -

- i. Demographic assumptions such as mortality, employee turnover rate, disability, early retirement, claims rates under medical plans and;
- ii. Financial assumptions such as discount rate, future salary, expected rate of return on plan assets.

**Class Example- 1 (on Define Benefit Obligation)**

An Entity announced Defined Bonus plan for its 50 employees. Bonus would be payable after serving 5 years (Long Term Benefit). Bonus amount would be 8% of Last drawn Salary after 5 years for each year of service. Discount Rate = 10 % p. a. Current Avg. Salary p.a. per Employee = 6,00,000/- . Salary Inflation Rate = 7 % p.a. Show Accounting as per As 15.

Solution :-

Defined Benefit Plan = Defined Bonus = 8% of Salary for Each year of Service.

Step - 1:

Calculate Total Defined Benefit

|   |   |
|---|---|
| Current salary                                | 6,00,000/-  |
| Expected Salary after 5 years<br>Per Employee | $(6,00,000 \times 1.07) \times 1.07 \times 1.07 \times 1.07 = 7,86,478/-$ |
| Estimated Defined Benefit                     | $7,86,478 \times 8\% \times 5 \text{ YEARS} \times 50 \text{ No.}$        |
|   | 1,57,29,552   |

Step - 2:

Calculate Allocated Benefits per year

|                   |                      |
|-------------------|----------------------|
| Allocated Benefit | $1,57,29,552 \div 5$ |
|                   | 31,45,910/-          |

Step - 3:

Calculate Current Service Cost (CSC)

| Year | Allocated Benefits | PVF @ 10% | CSC       |
|------|--------------------|-----------|-----------|
| 1    | 31,45,910          | 0.683     | 21,48,657 |
| 2    | 31,45,910          | 0.751     | 23,62,578 |
| 3    | 31,45,910          | 0.826     | 25,98,523 |
| 4    | 31,45,910          | 0.909     | 28,59,634 |
| 5    | 31,45,910          | 1         | 31,45,910 |

Future Cost

Accrued exp

Step - 4

Calculation of Interest Cost

|                           | 1 <sup>st</sup> | 2 <sup>nd</sup> | 3 <sup>rd</sup> | 4 <sup>th</sup> | 5 <sup>th</sup> |
|---------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Opening Balance           | 0               | 21,48,657       | 47,26,101       | 77,97,234       | 114,36,591      |
| Int. Cost (10 %)          | 0               | 2,14,866        | 4,72,610        | 7,79,723        | 11,47,051       |
| CSC recognised at the End | 21,48,657       | 23,62,578       | 25,98,523       | 28,59,634       | 31,45,910       |
| Closing Bal               | 21,48,657       | 47,26,101       | 77,97,234       | 1,14,36,591     | 1,57,29,552     |

Journal Entry

|                      |   |                 |
|----------------------|---|-----------------|
| 1 <sup>st</sup> Year | Current Service cost a/c Dr.                    | 21,48,657       |
|                      | To Defined Benefit Obligation Payable (DBO) A/c | 21,48,657       |
| 2 <sup>nd</sup> year | Current Service Cost A/c Dr.                    | 23,62,578 (P&L) |
|                      | Interest Cost A/c Dr.                           | 21,48,657 (P&L) |
|                      | To DBO Payable A/c                              | 25,77,444       |

**Example 2: (on Define Benefit Obligation)**

A lump sum gratuity, equal to 1% of final salary for each year of service, is payable on termination of service. The salary in year 1 is Rs. 10,000 and is assumed to increase at 7% (compound) each year resulting in Rs. 13,100 at the end of year 5. The discount rate used is 10% per annum. Shows how the obligation builds up for an employee who is expected to leave at the end of year 5, assuming that there are no changes in actuarial assumptions.

**SOLUTION:**

(Amount in Rs.)

**Computation of benefits attributed to the current and prior years:**

| Year                                | 1   | 2   | 3   | 4   | 5   |
|-------------------------------------|-----|-----|-----|-----|-----|
| <b>Benefit attributed to:</b>       |     |     |     |     |     |
| - Prior year                        | 0   | 131 | 262 | 393 | 524 |
| - Current year (1% of final salary) | 131 | 131 | 131 | 131 | 131 |
| - Current and prior years           | 131 | 262 | 393 | 524 | 655 |

**Computation of obligation for an employee:**

| Year                                   | 1         | 2          | 3          | 4          | 5          |
|--|-----------|------------|------------|------------|------------|
| Opening Obligation                     | -         | 89         | 196        | 324        | 476        |
| Interest at 10%                        | -         | 9          | 20         | 33         | 48         |
| Current service cost (see note 2)      | 89        | 98         | 108        | 119        | 131        |
| <b>Closing Obligation (see note 1)</b> | <b>89</b> | <b>196</b> | <b>324</b> | <b>476</b> | <b>655</b> |

**Note 1****Closing obligation**

| Year                  | 1         | 2          | 3          | 4          | 5          |
|-----------------------|-----------|------------|------------|------------|------------|
| Gratuity attributable | 131       | 262        | 393        | 524        | 655        |
| Payable after (years) | 4         | 3          | 2          | 1          | 0          |
| Discounting factor    | .683      | .751       | .826       | .909       | 1          |
| <b>PV</b>             | <b>89</b> | <b>196</b> | <b>324</b> | <b>476</b> | <b>655</b> |

**Note 2****Current Service Cost**

| Year                     | 1         | 2         | 3          | 4          | 5          |
|--------------------------|-----------|-----------|------------|------------|------------|
| Gratuity of current year | 131       | 131       | 131        | 131        | 131        |
| Payable after (years)    | 4         | 3         | 2          | 1          | 0          |
| Discounting factor       | .683      | .751      | .826       | .909       | 1          |
| <b>PV</b>                | <b>89</b> | <b>98</b> | <b>108</b> | <b>119</b> | <b>131</b> |

**Example 3: (Plan Assets)**

On 1.4.20X1, the fair value of plan assets is Rs.10,000. On 30.9.20X1 it paid benefits of Rs. 1,500 and received contributions of Rs. 4,500. On 31.03.20X2, fair value of plan assets is Rs.15,000 and PV of obligation was Rs. 14,972. Actuarial losses on obligation was Rs. 60 on 31.03.20X2. Find the net actuarial gain/losses on 31.03.20X2 based on the following estimates:

Interest and dividend income

Realised and unrealized gain on plan assets

Administration costs

9.00%  
1.50%  
(1.00%)

= 9.5% Ex. Retn.

**Solution**

- Annual Expected Return = 9.50%
- Six Monthly Rate = Squar Root of  $[(1 + 0.095) - 1] \times 100 = 4.64\%$

**Plan Assets A/c**

|       |                |        |       |         |       |
|-------|----------------|--------|-------|---------|-------|
| 01/04 | To Balance b/f | 10,000 | 30/09 | By Bank | 1,500 |
| 30/09 | To Bank a/c    | 4,500  |       |         |       |

|       |  |            |       |                |        |
|-------|--|------------|-------|----------------|--------|
| 31/03 | To Expected Return<br>10,000 × 9.5%<br>3,000 × 4.64% | 950<br>139 |       |                |        |
| 31/03 | To Actuarial Gain                                    | 911        | 31/03 | By Balance c/d | 15,000 |

### Example – 4 (Plan Assets)

FY 23-24

|        |                                  |            |
|--------|----------------------------------|------------|
| 1/4/23 | Opening Balance of Plan Assets   | 5,00,000/- |
| 1/4/23 | Contribution to Plan Assets      | 1,00,000/- |
| 1/4/23 | Benefits Paid out of Plan Assets | 1,50,000/- |
|        | Expected Return                  | 12% p.a.   |
|        | Fair Value on 31/03/24           | 5,20,000/- |

### Solution –

#### Plan Assets A/c

|      |  |          |                           |          |
|------|--|----------|---------------------------|----------|
| ¼    | To Balance b/d                                   | 5,00,000 | ¼ By Bank (Benefits paid) | 1,50,000 |
| ¼    | To Bank A/c                                      | 1,00,000 |                           |          |
| 31/3 | To Expected Income<br>(Income @ 12% on 4,50,000) | 54,000   |                           |          |
| 31/3 | To Actuarial Gain (P&L)                          | 16,000   | 31/3 By Balance c/d       | 5,20,000 |

|                            |  |
|----------------------------|--|
| Actual Return for the year | Expected Return + Actuarial Gain /loss |
|                            | 54,000 + 16,000                        |
|                            | 70,000                                 |

### Example – 5

Assume Same Example 4 above, with following Changes:

Date of Contribution made Benefits paid is 31/3/24. Prepare Plan Asset A/c

### Solution –

| Plan Asset A/c |  |          |                         |          |
|----------------|--|----------|-------------------------|----------|
| ¼              | To Balance                             | 5,00,000 | 31/3 By Bank (Benefits) | 1,50,000 |
| 31/3           | To Expected Return<br>(12% on Opening) | 60,000   |                         |          |
| 31/3           | To Bank A/c                            | 1,00,000 |                         |          |
| 31/3           | To Actuarial Gain (b/f)                | 10,000   | 31/3 By Balance         | 5,20,000 |

|                                    |                 |
|------------------------------------|-----------------|
| Actual Return                      | 60,000 + 10,000 |
| (Expected Return + Actuarial Gain) | 70,000/-        |

### Example – 6

Assume Same Example 4 as above But Date of Contribution & Benefits paid are on 1/10. Prepare Plan Asset a/c

|                           |   |
|---------------------------|---|
| Expected Return           | 12% p.a. Annual Rate                              |
| Six Monthly Compound Rate | $[(1 + \text{Annual rate})^{1/2} - 1] \times 100$ |
|                           | $[(1 + 0.12)^{1/2} - 1] \times 100$               |
|                           | 5.83% Six monthly Compounded                      |

| Plan Asset A/c |   |          |                         |          |
|----------------|---|----------|-------------------------|----------|
| ¼              | To Balance  | 5,00,000 | 31/3 By Bank (Benefits) | 1,50,000 |
| 1/10           | To Bank A/c   | 1,00,000 |                         |          |
| 31/03          | To Expected Return<br>$5,00,000 \times 12\% = 60,000$ | 57,085   |                         |          |

|                                      |        |                 |          |
|--------------------------------------|--------|-----------------|----------|
| $(50,000) \times 5.83\% =$<br>(2915) |        |                 |          |
| 31/3 To Actuarial Gain (b/f)         | 12,915 | 31/3 By Balance | 5,20,000 |

|                                    |                 |
|------------------------------------|-----------------|
| Actual Return                      | 57,085 + 12,915 |
| (Expected Return + Actuarial Gain) | 70,000/-        |

### 4.3 PAST SERVICE COST (PSC)

**Meaning of PSC** - Change in the present value of the defined benefit obligation resulting from a plan amendment is known as past service cost (PSC).

- **PSC is divided into two parts:**
  - (a) Amortised Past service cost - which is to be **recognized immediately** to the extent benefits are **already vested**.
  - (b) Unamortised Past Service cost - to be recognized on **straight line basis** over the remaining period until the benefits are vested.
- **Example of Past Service Costs:** due to the recent amendments in Gratuity Act, 1972 there is substantial increase in the gratuity liability of the company (i.e. from 10 lacs to 20 lacs). Such increase in liability would be regarded as Past Service Cost.

#### Example 7:

An enterprise operates a pension plan that provides a pension of 2% on final salary for each year of service. The benefit will be vested after 5 years of service. On 1.1.2005, the enterprise improves the pension to 2.5% of the final salary for each year of service starting from 1.1.2001 at the date of improvement the Present Value of additional benefits for service from 1.1.2001 to as follows:

- Employees with more than 5 years of service at 1.1.2005      Rs. 2,00,000
- Employees with less than 5 years of service Rs. 1,20,000  
(Average period until vesting = 3 years)

Suggest the accounting treatment.

#### Solution

- 1) Amortised PSC means additional Benefits payable to employees with more than 5 years of Service, hence 2,00,000 it is to be immediately Recognised in P&L.
- 2) Unmortised PSC mean additional Benefits payable to employees with Less than 5 years i.e. Unvested Benefits of Rs 1,20,000 is to recognised in next 3 years.

### 4.4 CURTAILMENT AND SETTLEMENT

- Curtailment or Settlement is a transaction that **eliminates all further legal or constructive obligations for part or all of the benefits provided under defined benefit plan**.
- In a simple language, if Defined Benefit Obligation plan is modified in such a way that **employees will not get benefit**, rather benefit originally planned is being reduced, it is called curtailment.
- However, settlement amount may have to be given by entity as a compensation against curtailment of benefits.
- An enterprise should recognize gains or losses on the curtailment when the curtailment occurs.

Journal Entry:

Defined benefit Liability A/c Dr. (Curtailment Amt.)  
 To un-amortised past service cost a/c  
 To Bank A/c (Settlement)  
 To Gain on Curtailment A/c (Balancing Fig)

- **Gain on curtailment** shall be transfer to Statement of P&L under **Employee Benefit Expense**.

Example 8:

An enterprise discontinues a business segment and the employees of this segment will earn no further benefits. This is curtailment without a settlement. Immediately before the curtailment the details were.

|                                   | Before Curtailment | After Curtailment |
|-----------------------------------|--------------------|-------------------|
| PV of obligation                  | 1,000              | 900               |
| FV of plan assets                 | 820                | 820               |
| Unrecognized past service cost 50 |                    | 45                |

The curtailment reduces the obligation to Rs. 900 and URPS to Rs.45. Suggest the accounting treatment.

Solution:

DBO Payable A/c Dr.100  
 To Un-amortised PSC A/c 5  
 To Gain on Curtailment A/c 95  
 (P&L A/c)