**Task Format: Actuarial Valuation of Gratuity**

1. **Actuarial Assumptions:** In the actuarial valuation of gratuity, actuarial assumptions are used to measure the expense and/or liability. These assumptions are estimates of key indicators that are directly used to calculate the employees defined benefits or retirement benefits obligations. The following are the actuarial assumptions needed for gratuity valuation:
   * **Mortality rate:** The rate at which employees are expected to die.
   * **Salary growth rate:** The rate at which salaries are expected to increase.
   * **Expected future salary:** The expected salary of an employee in the future.
   * **Attrition rate of the company:** The rate at which employees leave the company.
2. **Definition of each assumption:**
   * **Mortality rate:** Mortality rate is the frequency of death in a population. It is used to estimate how long an employee is expected to live and how much money will be paid out in benefits.
   * **Salary growth rate:** Salary growth rate is the percentage increase in salary over a period of time. It is used to estimate how much an employee’s salary will increase in the future.
   * **Expected future salary:** Expected future salary is the estimated salary of an employee in the future. It is used to calculate the present value of future benefits.
   * **Attrition rate of the company:** Attrition rate is the percentage of employees who leave a company over a period of time. It is used to estimate how many employees will retire and how many will leave before retirement.
3. **Structure:**
   * Calculate gratuity for employees based on their service years as per the scheme mentioned above.
   * Calculate gratuity for each employee using actuarial assumptions mentioned above.
   * Calculate total gratuity liability for all employees.
   * Discount total gratuity liability using discount rate mentioned above.
4. **Task:**

Your task is to perform an actuarial valuation of gratuity based on the given scheme for retirement and actuarial assumptions mentioned above.

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| Past service | Benefit | Example |
| 3 to 5 | 1 times monthly salary times past service | =25000\*1\*3 |
| 5 to 15 | 2 times monthly salary times past service |  |
| 15 + | 3 times monthly salary times past service |  |

Assumption

Discount rate: 10%

Salary growth rate: 9%