Time value of Money :-

General Inflation Rate :- 5 to 6 %

Compensentory Quantification :- Interest.

Interest Rate is opportunity loss cost / value.

3 types of Interest :-

i) Nominal Rate of Interest :- Visible to us. Eg:- savings account interest, loan interest.
promisary value.

ii) Real Rate of Interest :- Nominal Rate adjusted by Inflation.

iii) Effective Rate of Interest :- Nominal Rate which includes compounding factor.

Eg:- r% per annum compounded quaterly.

$$r_{eff} = \left(1 + \frac{r}{4}\right)^4 - 1$$

Continuous compounding :-

m = no. of times interest is compounded per year

$$\left(1 + \frac{r}{m}\right)^{mt} = \left(\left(1 + \frac{r}{m}\right)^{\frac{m}{r}}\right)^{rt} = \underbrace{e^{rt}}_{\text{growth factor}} \text{ as } m \longrightarrow \infty$$

0 years — t years

P — Pe^{rt}

$$\boxed{r_{eff} = e^{rt} - 1}$$