Amortization :

Which describes the equivalence of a capital sum over a period of time , although in accounting it may have a more restrictive meaning.
In an industrial company it may be considered as a program or policy where by the owners (stock holders) of the company have their investment of depreciable capital partly protected against loss.
The invested capital may be used for either of two purposes as working capital, or to buy machinery and buildings

Capital recovery

Capital recovery is a very important factor in engineering economic studies and will be defined as repayment of the original capital plus interest.

For example : if a company pays 1000rs for an electric motor and pump that has an assumed life of 10 yrs and at the end of 10yrs the motor and pump are worn out , the company has nothing to show for its 1000 investment . this capital has disappeared ,. If the co has paid no individends at this time , the stock holders who put up the original rs 1000 would have lost their capital plus the invest that would have been earned by investing in a profitable venture . thus inorder to avoid such a loss, some provision must be made to protect the owner.

Depletion :

The exhaustion of certain natural such as petroleum , metal deposits , orchards , vineyards , timber, reserves , fisheries , etc. Which disappear used is termed as depletion
In some cases, these resources may be renewed over a period of years by nature , but in other cases they disappear forever
A depletion account is setup to indicate that portion of the initial asset that has been used .this account will accumulate in the same manner as a depreciation account and can be considered as part of the lump sum paid to the owners when operations cease because the natural resources is exhausted.
A depletion allowance can be paid annually to the owner where the life of the resource can be estimated with a fair degree of accuracy .

Define 'capitalized cost'

The capitalized cost for the service requires a capitalization of the annual cost for the periodic renewal of the installation using the money put aside in a sinking fund in addition the other uniform annual expenditure must be applied and also the annual interest on the investment.

Using eg (2.9)

⟶ R" = is the sinking fund deposit

i'= sinking fund interest rate

$R = P\ i/(1+i)^n-1$

Assume i'= 0.08

$= 30008X0.08/(1+0.08)^3-1$

R"= 924

Annual expenditure = 200

= 3000X0.08 X 200 = 924+240+200 = 1364

Total amount cost R' ⟶ R" + annual interest +annual expenditure

924+240+200= 1364

$3000(1+i)^n = 3000(1+0.08)^3 = 3780$

$S = R\ (1+i)^n -1 / i$

$=3000(1+0.08)^3-1/0.08$

S = 3780+650 = 4430

S for 1 year expenditure = $200X(1+0.08)^2$

S for 2 year expenditure =$200X(1+0.08)^1$

S for 3 year expenditure =$200X(1+0.08)^0$

650