CHAPTER FOUR

SIMPLE INTEREST

Introduction:

- When we borrow money from institutions such as banks, the borrowed money is referred to as the principal.-
- When we are returning the borrowed money to the bank, we have to add a certain amount to it.-
- This amount we add is what we call the interest or the simple interest.
- If we go and put or deposit money at institutions such as a bank, this amount or money deposited is also referred to as the principal.
- If this money stays at the bank for a certain length of time, the bank will add a certain amount to it.
- This added amount is also called the simple interest or the interest.

S.I = $\frac{P \times R \times T}{100}$

where S.I = the simple interest,

P = the principal,

R = the rate and

T = the time in years.

(Q1) Find the simple interest on ¢500, for 8 years at a rate of 6% per annum.

Soln:

P = ¢500, R = 6% and T = 8 years.

S.I = $\frac{P \times R \times T}{100}$

=> S.I = $\frac{500 \times 6 \times 8}{100} = 240.$

$\therefore$ The simple interests =¢240.

N/B: Per annum means every year or yearly.

(Q2) A man deposited ¢700 at a bank for 3 years. If the rate was at 5% per annum, calculate the simple interest.

Soln:

P = ¢700, T = 3 years and R = 5%.

S.I = $\frac{P \times R \times T}{100}$

=> S.I = $\frac{700 \times 5 \times 3}{100} = 105.$

=> The simple Interest = ¢$105.$

(Q3)Mr Addo's wife Auntie Ama, put an amount of ¢120 at bank for 4 years, at a rate of 10% per annum.

Determine the amount of interest paid to her by the bank.

Soln:

P = ¢120, T = 4 years and R = 10%.

S.I = $\frac{P \times R \times T}{100}$

=> S.I = $\frac{120 \times 10 \times 4}{100} = 48.$

=> The interest = ¢48.

(Q4) Mr. John borrowed ¢2000 from a bank for 10years, at a rate of 5% per annum. Calculate

(i) the interest he paid on this loan.
(ii) the amount he returned to the bank.

Soln:

P= ¢2000, T = 10years and R = 5%

S.I = $\frac{P \times R \times T}{100}$

=> S.I = $\frac{2000 \times 5 \times 10}{100} = ¢1000.$

=> The interest he paid = ¢$1000.$

(ii) The amount he paid or returned to the bank = the amount borrowed + the interest.

=> The amount returned = 2000 + 1000 = ¢3000.

(Q5) Mr. Quaye wishes to take a loan of ¢400 from a bank for 8 years at a rate of 20% per annum. Determine the amount he will have to pay back to the bank.

Soln:

P = ¢400, R = 20% and T = 8years.

S.I = $\frac{P \times R \times T}{100}$

=> S.I = $\frac{400 \times 20 \times 8}{100} = 64.$

=> The interest he has to pay = ¢64.

The amount that he will have to return to the bank = the loan or the borrowed amount + the interest.

=> The amount he will have to pay = 400 + 64 = ¢464.

N/B: If the time is given in months, then you will have to divide it by 12, in order to change it into years.