**Time value opf money**

**Future values (Compounding)**

A dollar in hand today is worth more than a dollar received tomorrow because of the interest it could earn from putting it in a savings account. Compound interest means that the interest earns interest.

Fn= P0(1+i)

Or

Fn= p.FVIFi,n

Example

Mr. Ali placed Rs. 10,000- in a savings account earning 8% compounded annuall. How much money will he have in the account at the end of 4 years?

Solution: Using Appendix A.

F4= 10,000(1.3605)

F4 =13,605

Future value of an annuity

An annuity can be defined as a series of payments or receipts of a fixed ammountfor a number of periods. Future value of an annuity is a compound annu7ity which involves depositing an equal sum of money at the end of each period for a certain number of periods and allowing it to grow with compound interest rate.

FVA=A(FVIFAi,n)

Q.2. Compute the future values of : 1. An initial Rs. 20,000- compounded annually for 10 years at 8%. 2. An annuity of Rs. 20,000- for 10 years at 8%.

Solution:

Fn= p.FVIF8%, 10

Using appendex A

Fn= 20,000(2.1589)

Fn= 43,178-

2. FVA=A(FVIFA8%,10)

Using Appendix-D

FVA= 20,000(14.486)

FVA=289,720-