# DAFFODIL INSTITUTE OF IT (DIIT)

**BBA (Honours) in Tourism and Hospitality Management (THM)**

**Third Year Sixth Semester**

**Fundamentals of Finance**

**Chapter- 3**

**Time Value of Money and its Application**

---

***1. What is time value of money?***
***Or. What do you mean by time value of money?***
***Or. Define time value of money.***

**Time value of money:** Time value of money means the value of a unit of money is different in different time period. The value of a sum of money received today is more than its value received after some time.

According to L.J. Gitman, "Time value is based on that belief that a dollar today is worth more than a dollar that will be received at some future date."

***2. Why is time value of money relevant in making financial decisions?***
***Or. For what reasons time value of money is important?***
***Or. Objectives/ Functions/ Advantages of Time Value of Money.***
***Or. List five different financial applications of the time value of money.***
***Or. List three different financial applications of the time value of money.***

The importance of time value of money in taking financial decision is discussed below:

**Taking investment decision:** Investment is the cash outflows in current year but cash inflows are received in future. Time value of money helps to take financial decision by converting future expected cash inflows into present value.

**Calculation of Present Value and Future Value:** We can calculate the future value of present amount and present value of the future cash flow.

**Determining of interest rate:** The interest rate of a loan and deposit are determined under the concept of time value of money.

**Determining time period:** By using the time value of money, we can find out the number of time period of certain amount at a fixed rate of interest.

**Calculation of installment:** The loan is repaid at present and deposit is accumulated in future at installment basis. To determine the installment time value of money is to be considered.

**Valuation of Financial Securities:** The process of present value that links risk and return determines the worth of financial securities.

***3. What is Present Value?***

**Present Value:** The value of present time of a future amount of money or a series of payments, evaluated at a given rate is called present value. To calculated present value, it is necessary to understand discount rate and discounting. Present value is also called discounted value.

i. Present value is the current value of a future amount of money. -Van Home.
**ii.** Present value is the current value of dollars that will be received in the future. Benton.

***4. What is future value?***

**Future value**: The value at future time of a present amount of money or a series of payments, evaluated at a given interest rate is called future value. Future value is also called compound value or terminal value. Future value is also called compound value or terminal value.

i. Future value is cash you will receive at a given future date. -L.J. Gitman.
ii. Future value is the value at some future time of a present amount of money. –Van Home.

***5. Why does money have time value?***
***Or. Describe the reasons for time preference of money.***

The following reasons can be described for time preference of money:

**Risk:** Risk is the variability of return from those that are expected or chance of financial loss. So, an investor prefers receiving cash at now to future cash receipts.

**Uncertainty:** Future is always uncertain. Whereas present is more certain and safe than future. As the firms are not certain about the future cash received, it should give preference the present cash received.

**Time preference of present consumption:** People always give priority to the present consumption than future consumption. Moreover, due to illness and death, it may not be possible to consume in future. That is why, a certain amount of money at present is more valuable than future.

**Investment Opportunities:** Most individuals prefer present cash to future cash because of the available investment opportunities to which they can put present cash to earn additional cash.

**Inflation:** Over time the purchasing powers of money reduce is called inflation. In such situation to avoid the loss of value of money over time people prefer present cash receipt.

**Required Rate of Return:** The funds so invested will earn a rate of return; this would not be possible if the funds are received at a later time. Thus, time value of money is of crucial significance. This requires the development of procedures and techniques for evaluating future income in terms of the present.

**Opportunity cost:** Money has opportunity cost. By investing money at present people can get profit. Say, if we invest tk 1000 today, we will get tk 1200 at future. For this additional tk200 people consider tk 1000 at present than tk 1000 in future.

For the above reasons people give importance to the time value of money.

***6. "A dollar received today is always worth than a dollar received tomorrow". Explain.***

The time value of money (TVM) is an important concept to investors because a dollar on hand today is worth more than a dollar received in the future. The dollar received today can be used

to invest and earn interest or capital gains. A dollar today is worth more than a dollar tomorrow due to inflation or its buying capacity. The value of a dollar changes dramatically depending upon when you get it and what you do with it. Say you have $1 today. If you keep it in your house for a year, you will still have $1 at the end of the year. But if inflation during that year is 5 percent, the $1 item that you wanted to buy a year ago will have increased 5 percent and now costs $1.05. Your $1 will have lost value because you now need $0.05 more to buy the same item. In this case, a dollar today is worth more than the same dollar next year.
But if you put the $1 in a bank savings account and you earn 5 percent, then at the end of the year, your $1 is now worth $1.05. The item you want to buy now costs $1.05 so your account has kept up with inflation. Better in the bank than under the mattress!

***7. What are the determining factors of time value of money?(2014)***

There are five factors for determining time value of money:

a) Number of time periods involved (months, years)
b) Annual interest rate (or discount rate, depending on the calculation)
c) Present value (what do you have right now in your pocket)
d) Payments (if any exist. If not, payments equal zero)
e) Future value (the dollar amount you will receive in the future. A standard mortgage will have a zero future value, because it is paid off at the end of the term)