Q. What are derivatives?

A. Derivatives are financial contracts, or financial instruments, whose values are derived from the value of something else (known as the underlying assets). The underlying on which a derivative is based can be an asset (e.g., commodities, equities (stocks), residential mortgages, commercial real estate, loans, bonds), an index (e.g., interest rates, exchange rates, stock market indices, consumer price index (CPI) or other items (e.g., weather conditions, or other derivatives). These contracts are legally binding agreements, made on the trading screen of stock exchanges, to buy or sell an asset in future.

Q. What are the uses of derivatives?

A. Investors can use derivatives for the following purposes:

Hedging: Derivatives can be used to mitigate the risk of economic loss arising from changes in the value of the underlying.

Speculation: derivatives can be used by investors to increase the profit arising if the value of the underlying moves in the direction they expect.

Arbitraging: The simultaneous purchase and sale of an asset in order to profit from a difference in the price. It is a trade that profits by exploiting price differences of identical or similar financial instruments, on different markets or in different forms. Arbitrage exists as a result of market inefficiencies; it provides a mechanism to ensure prices do not deviate substantially from fair value for long periods of time.

Q. How many types of derivatives are?

A. Two types of derivatives are exists:

Linear Derivatives: Linear derivatives are those financial instruments, which has a linear functional relationship with the underlying security such as Forward, Futures and Swaps.

Non- linear Derivatives: Non- linear Derivatives are those financial instruments, which has a Non- linear functional relationship with the underlying security such as Options and Convertibles.

Q. What are forward contracts?

A. A forward contract is a customized contract between the buyer and the seller where settlement takes place on a specific date in future at a price agreed today. E.g. the foreign currency exchange rate is a big forward contract market in India with banks, financial institutions, corporate and exporters being the market participants. Forward contracts offer tremendous flexibility to the parties to design the contract in terms of the price, quantity, quality (in case of commodities), delivery time and place.

FUTURES

Q. What are future contracts?

A. Futures are exchange-traded contracts to buy or sell an asset in future at a price agreed upon today. The asset can be share, index, interest rate, bond, rupee-dollar exchange rate, sugar, crude oil, soybean, cotton, coffee etc.

Q. What are the differences between future and forward contracts?

A.

Features	Forward Contract	Future Contract
Operational Mechanism	Not traded on exchange	Traded on exchange
Contract Specifications	Differs from trade to trade.	Contracts are standardized contracts.
Counterparty Risk	Exists	Exists, but assumed by Clearing Corporation/ house.
Liquidation Profile	Poor Liquidity as contracts are tailor maid contracts.	Very high Liquidity as contracts are standardized contracts.
Price Discovery	Poor; as markets are fragmented.	Better; as fragmented markets are brought to the common platform.

Q. What is a swap contract?

A. A contract between two parties in which the parties: (a) promise to make payments to one another on scheduled dates in the future, and (b) use different criteria or formulas to determine their respective payments. Swaps are not guaranteed by any clearinghouse, and, therefore, are susceptible to default. Corporations and financial institutions are the primary users of swaps.

Examples: interest rate swaps, where floating rate interest is exchanged for fixed rate interest if the interest rates go down

Q. What are Index futures?

A. Index futures are the future contracts for which underlying is the cash market index.

For example: the CNX NIFTY Index is one of the most widely traded index futures contracts in the Indian Stock portfolio managers who want to hedge risk over a certain period of time often use CNX NIFTY futures to do so. By shorting these contracts, stock portfolio managers can protect themselves from the downside price risk of the broader market. However, by using this hedging strategy, if perfectly done, the manager's portfolio will not participate in any gains on the index; instead, the portfolio will lock in gains equivalent to the risk-free rate of interest.

Q. What are the popular types of future contracts available?

A. Futures are commonly available in the following flavors:

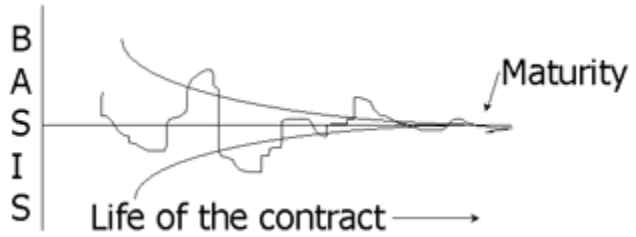
- Stocks and index futures
- commodity futures
- Interest Rate Futures
- Foreign Currency futures
- commodity futures
- Bullion Futures

Q. **How is the futures contract defined?**

A. Suppose ACC future contract expiring on 27th Jul, 2010 is defined as "Fut-ACC-27-Jul-2010". Wherein "Fut" stands for Futures as derivatives product, "ACC" for underlying stock and "27-Jul-2010" for expiry date.

Q. What is basis in futures market?

A. Basis is defined as the difference between cash and futures prices. It can be either positive or negative (in Index futures, basis generally is negative). It may change its sign several times during the life of the contract. It turns to zero at maturity of the futures contract i.e. both cash and future prices converge at maturity.



Q. Who are operators?

A. Three kinds of operators are available in the derivatives market.

Hedgers - Operators, who want to transfer a risk component of their portfolio.

Speculators - Operators, who intentionally take the risk from hedgers in pursuit of profit.

Arbitrageurs- Operators who operate in the different markets simultaneously, in pursuit of profit and eliminate mis-pricing.

Q. How can an investor use futures?

A. Futures contracts can be used in many different ways depending on investment objectives:

To safeguard existing underlying assets by hedging: If an investor expect a downturn in prices, he can consider opening a futures position to protect your existing asset (e.g. your share portfolio). As a holder of the asset, he can sell futures against his equity portfolio to avoid making a loss and without having to incur the costs associated with selling his assets. To "close" the futures position by buy the equivalent amount of futures in the market. Losses in the underlying asset can therefore be compensated by profit made on the futures position.

To make profit from volatile market by speculating: Futures provide the opportunity to profit from the upward and downward turns in the prices of underlying assets. For a view that market prices will rise, consider buying futures i.e. long position. Conversely, for a view that market prices will fall, consider selling futures i.e. shor position. If the view held materializes, the position can be closed by undertaking an equal and opposite position in the same market in order to profit from the price difference.

Q. How does settlement take place?

A. stock and index futures are settled in cash. The closing price in the cash segment is considered as the settlement price. The difference between the trade price and the settlement price is ultimately your profit/loss.

Q. What happens to the futures price as a contract approaches expiry?

A. As the futures contract approaches expiry, the cost of carry reduces as time to expiry reduces; thus futures and cash prices start converging. On expiry day, the futures price should equal cash market price.

Q. **How is futures trading different from margin trading?**

A. While buy/sell transactions in margin segment have to be squared off on the same day, buy/sell position in the futures segment can be continued till the expiry of the respective contract and squared off any time during the contract life.

Margin positions can even be converted to delivery if you have the requisite trading limits in case of buy positions and required number of shares in your DP in case of sell position. There is no such facility available in case of futures position, since all futures transactions are cash settled as per the current regulations. If you wish to convert your future positions into delivery position, you will have to first square off your transaction in future market and then take cash position in cash market.

Another important difference is the availability of even index contracts in futures trading. You can even buy/sell NIFTY in case of futures in NSE, whereas in case of margin, you can take positions only in stocks.

Q. **Mark To Market (MTM). What is meant by Minimum Margin?**

A. Minimum Margin is the margin amount, you should have available with us all the time. Once the available margin with us goes below the minimum required minimum margin, our system would block additional margin required from the limit available.

Q. **What is meant by EOD MTM (End of Day - Mark To Market) process?**

A. EOD MTM on daily basis is a mandatory requirement in case of futures. Every day the settlement of open futures position will take place at the closing price of the day. The base price as shown in the Open Position - Futures page is compared with the closing price and difference is cash settled. In case of profit in EOD MTM, limits are increased by the profit amount and in case of loss, limits are reduced to that extent. Next day the position would be carried forward at the previous trading day closing price at which last EOD MTM was run. Closing price for all the contracts are provided by exchange after making necessary adjustment for abnormal price fluctuations. It is different than LTP.

Q. **When is the obligation amount debited or credited in my bank account?**

A. All futures obligation is settled by exchange on T+1 basis. This means that any obligation arising out of transactions in futures or EOD MTM on day (t) is settled on an immediate next trading day. This further means that if you have a debit obligation on day (t), the payment will have to be made on day (t) itself. Whereas If you have a credit obligation, amount would be credited in your account on t+1 day. If t+1 days is holiday, credit would be given on subsequent day.

Q. **When do orders in Futures get freezed?**

1. **A. Price Freeze** - In case of Stock Futures orders are freezed by exchange, if the price range specified is beyond ± 20% of base price i.e. previous days closing price. In case of

Index Futures or Basket Futures orders are freezed by exchange, if the price range specified is beyond ± 10% of base price i.e. previous days closing price. However, the above price ranges may be changed depending upon the market volatility.

2. **Quantity Freeze** - In case of Stock Futures the quantity for each stock is specified by exchange from time to time and single order value should not normally be beyond Rs. 4 Crores. In case of Index Futures the quantity should not be beyond 15000. For further details on the respective quantities for each stock please refer NSE site

Q. **Is the margin % uniform for all stocks?**

A. It may not be so. Margin percentage may differ from stock to stock based on the risk involved in the stock, which depends upon the liquidity and volatility of the respective stock besides the general market conditions. Normally index futures would attract less margin than the stock futures due to comparatively less volatile in nature. But all contracts within the same underlying would attract same margin %.

Q. **How is the margin calculation done in case of calendar spread?**

A. Spread position value is calculated by multiplying the weighted average price of position in far month contract and spread position quantity. Spread margin % is then applied to spread position value to arrive at spread margin.

In the above mentioned example margin position of 100 shares in Future - ACC- 26 Mar 2010 will be subjected to IM% and 100 spread position quantity would attract spread margin %. However, you will able to view only overall margin figure on open position page. Assuming IM and spread margin at 20% and 10% respectively, overall margin to be calculated as follows:

(a) Spread Margin
100*160*10%
Rs. 1600

(b) Non-Spread Margin
100*150*20%
Rs. 3000

(c) Overall Margin
a+b
Rs. 4600

Q. How fair price of future contract is calculated?

A. The fair price of a future contract is the spot price of underlying assets plus cost of carry less inflow in term of interest or dividend.

Fair price = Spot price + Cost of carry – Inflows

FPtT = CPt + CPt * (RtT - DtT) * (T-t)/365

here:

FPtT - Fair price of the asset at time t for time T.

CPt - Cash price of the asset.

RtT - Interest rate at time t for the period up to T.

DtT - Inflows in terms of dividend or interest between t and T.

Cost of carry = Financing cost, Storage cost and insurance cost.

Example: Suppose Reliance shares are quoting at Rs1000 in the cash market. The interest rate is about 12% per annum. The cost of carry for one month would be about Rs10. As such a Reliance future contract with one-month maturity should quote at nearly Rs1010. Similarly Nifty level in the cash market is about 5000. One month Nifty future should quote at about 5050. However it has been observed on several occasions that futures quote at a discount or premium to their theoretical price, meaning below or above the theoretical price. This is due to demand-supply pressures. Everytime a Stock Future trades over and above its cost of carry i.e. above Rs. The arbitragers would step in and reduce the extra premium commanded by the future due to demand. eg: woud buy in the cash market and sell the equal amount in the future. Hence creating a risk free arbitrage, vice-versa for the discount.

Q. What are the set of assumptions in fair price determination of a future contract?

A. following assumptions are:

- No seasonal demand and supply in the underlying asset.
- Storability of the underlying asset is not a problem.
- The underlying asset can be sold short.
- No transaction cost; No taxes.
- No margin requirements, and so the analysis relates to a forward contract, rather than a futures contract.

Q. How can an investor gain, if futures are not fairly priced?

A. Arbitrage opportunity exists:

If Futures price > Fair price; Buy in the cash market and simultaneously sell in the futures market.

If Futures price < Fair price; Sell in the cash market and simultaneously buy in the future market.

This arbitrage between Cash and Future markets will remain till prices in the Cash and Future markets get aligned.

Q. Can I sell a Future Contract before I own it?

A. You can sell first and then buy back later because a futures contract is an agreement to make the stated exchange at some time in the future. Selling first is referred to as shorting or selling short. To offset your obligation to deliver, you need to do is buy back your contract(s) prior to expiration.

Q. Can I square up my position at any time before expiry?

A. Yes. It is not necessary to wait for the expiry day once you have initiated the position. You can square up your position at any time during the trading session, booking profit or cutting losses.

Q. What are the advantages of trading in futures over cash?

A. The biggest advantage of futures is that you can short sell without having stock and you can carry your position for a long time, which is not possible in the cash segment because of rolling

settlement. Conversely you can buy futures and carry the position for a long time without taking delivery, unlike in the cash segment where you have to take delivery because of rolling settlement. Another advantage is that future positions are leveraged positions i.e. you can take a Rs100 position by paying Rs25 margin and daily mark-to-market loss, if any. This can enhance the return on capital deployed.

Q. What are margins and leverage?

A. It is a small percentage, of the value of the contract that is deposited with a broker. Margin deposits are set by the exchange and are subject to change with price movement and market volatility. Leverage is the ability to use a small amount of money to make an investment of greater value so that small price changes can result in huge profits or losses.

Q. What are types of margins?

A. **Initial margin**: When you place a trade, you pay an initial margin of the underlying value of the contract. Margins to cover the potential losses for one day. It collected on the basis of value at risk at 99% of the days.
Daily Margin: It is collected to cover the losses which have already taken place on open positions. Daily margins should be received by CC/CH and/or exchange from its members before the market opens for the trading on the very next day. Daily margins would be paid only in cash. For daily margins, two legs of spread positions would be treated independently.

Q. How can I use volume and open interest in to predict the market movement?

A. The total outstanding position in the market is called open interest. In case volumes are rising and the open interest is also increasing, it suggests that more and more market participants are keeping their positions outstanding. This implies that the market participants are expecting a big move in the price of the underlying. In case the volumes are sluggish and the open interest is almost constant, it suggests that a lot of day trading is taking place. This implies sideways price movement in the underlying.

Q. **Is there any impact on the limit on execution of a buy/sale order?**

A. If it is an execution of a fresh order (i.e. an order which would result into building up an open position), the margin blocked gets appropriately adjusted for the difference, if any, in the order price at which the margin was blocked and the execution price. Accordingly the limits are adjusted for differential margin.

If it is an execution of a cover order (order which would result into square off of an existing open position), the following impact would be factored into the limits:

a) Release of margin blocked on the open position so squared up.

b) Effect of profit & loss on the square off of such a transaction.

If an execution of an order resulting into building up spread position, impact on limits would be in terms of release of differential margin.

For example, you are taking an open buy position for 100 shares in Future - ACC- 27 Jul 2010 @ 150 and IM is 20%. Rs 3000/- would be blocked as an initial margin. Thereafter you take a sell position for 100 shares in Future - ACC- 26 Aug 2010 @ 160 and spread margin is 10%. Hence the execution of Future - ACC- 26 Aug 2010 order is resulting into spread position. As explained

above, margin required would be 100*160*10% = 1600/- now. Hence the excess margin of Rs 1400/- (3000-1600) would be released and added into your trading limits.

Continuing the above example, if you place an sell order for 100 shares in Future - ACC- 27 Jul 2010 @ 170, margin of Rs. 3400/- would be required to place this order. This margin would be required despite being a cover order to square off the open position in the same contract. Reason for the same is that the order now being placed by you would result into the increased risk exposure since the buy position of 100 shares in Futures - ACC - 27 Jul 2010 has already been considered as position building up spread position. If buy position of 100 shares in Futures - ACC - 27 Jul 2010 is squared off, sell position of 100 shares in Future - ACC- 26 Aug 2010 @ 160 would become non-spread position and subjected to margin at 20 % IM.

Q. **Can I do anything to safeguard the positions from being closed out?**

A. Yes, you can always allocate additional margin, so moto, on any open margin position. Since the close-out process is triggered when minimum margin required is more than available margin, having adequate margins can avoid calls for any additional margin in case the market turns unfavorably volatile with respect to your position. You can add margin to your position by clicking on "Add Margin" on the "Open Position - Futures" page by specifying the margin amount to be allocated further. However, you should keep in mind that whatever margin you add during the day will remain there only till the end of day mark to Market (EOD MTM) is run or upto the time you square off your position in that underlying and group completely. Next day if you want some more margin to be added towards the same open position, you will have to do 'Add Margin' again.

OPTIONS

Q. What are options?

A. Options are contracts that give the buyers the right, but not the obligation to buy or sell an underlying asset (stocks or index) at a specified price on or before a specified date. On the other hand, the seller is under obligation to perform the contract i.e. buy or sell the underlying.

Option Contracts are of two types:

Call Option: A call option gives the holder the right to buy an underlying asset by a certain date for a certain price. The seller is under an obligation to fulfill the contract and is paid a price of this which is called "the call option premium or call option price.

Put Option: A put option gives the holder the right to sell an underlying asset by a certain date for a certain price. The buyer is under an obligation to fulfill the contract and is paid a price for this, which is called "the put option premium or put option price"

Options are classified based on style/date:

European Option: which can be exercised only on the maturity date/ expiration?

American option: an option that may be exercised on any trading day on or before expiration.

Q**. What is the difference between future and option?**

A.

A. Futures	Options
Exchange traded, with notation	Same as futures
Exchange defines the product	Same as futures
Price is zero, strike price moves	Strike price is fixed, price moves
Price is zero	Price is always positive
Linear payoff	Nonlinear payoff
Both long and short at risk	Only short at risk

Q. How can an investor exercise a call option on stock?

A. An investor buys one European Call option on one share of Reliance Petroleum at a premium of Rs. 2 per share on 31 July . The strike price is Rs.60 and the contract matures on 30 September. It may be clear form the graph that even in the worst case scenario, the investor would only lose a maximum of Rs.2 per share which he/she had paid for the premium. The upside to it has an unlimited profits opportunity.

On the other hand the seller of the call option has a payoff chart completely reverse of the call options buyer. The maximum loss that he can have is unlimited though a profit of Rs.2 per share would be made on the premium payment by the buyer.

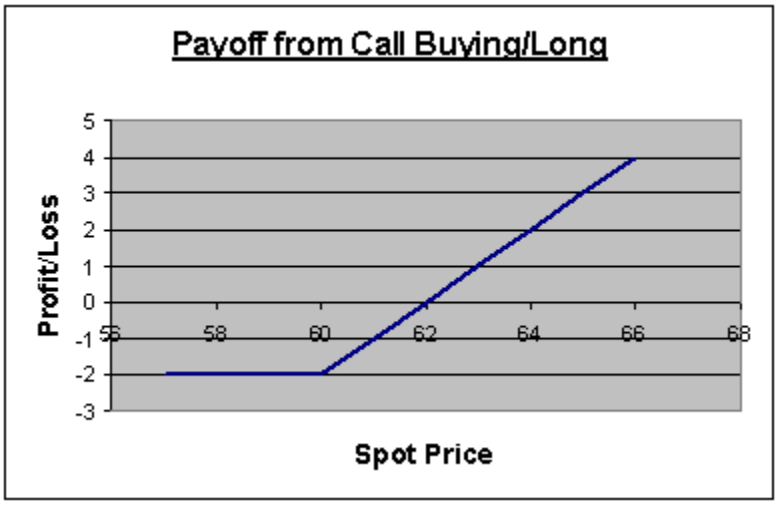
A European call option gives the following payoff to the investor:

max (S – Xt, 0).

The seller gets a payoff of:
-max (S - Xt, 0) or min (Xt - S, 0).

Notes:

S- Stock Price
Xt- Exercise price at time t.
C- European call option premium.
Payoff matrix (S-Xt, 0).



Q. How can an investor exercise a put option on stock?

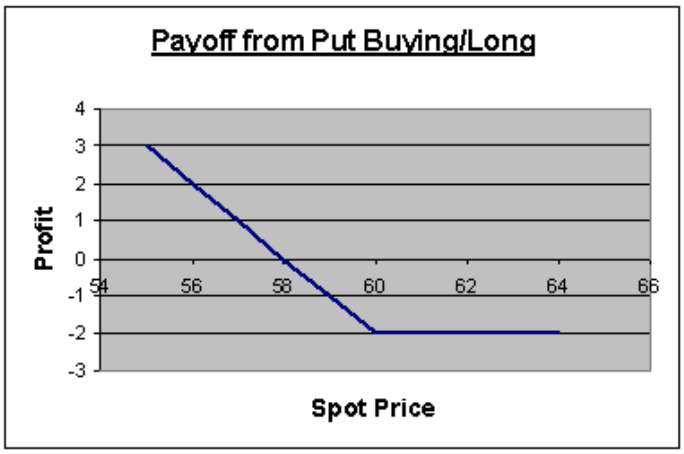
A. An investor buys one European Put Option on one share of Reliance Petroleum at a premium of Rs. 2 per share on 31 July. The strike price is Rs.60 and the contract matures on 30 September.

The payoff for the put buyer is:

max(Xt-S, 0).

The payoff for a put writer is :

Max (Xt - S, 0) or min (S - Xt, 0).



Q. What are the contract months available for options?

A. There are one(near)-, two(mid)- and three(far)-month contracts available presently. It is expected that once these contracts become liquid, the exchanges would introduce contracts of longer-term expiry/maturity.

Q. Who decides the strike price?

A. The exchanges specifies the strike price at which call and put options are traded. Generally to simplify matters, the exchanges specify the strike price interval for different levels of underlying prices, meaning the difference between one strike price and the next strike price over and below it.

Q. What are Covered and Naked Options?

A**. Naked Options**: These are options which are not combined with an offsetting contract to cover the existing positions.

Covered Options: These are option contracts in which the shares are already owned by an investor (in case of covered call options) and in case the option is exercised then the offsetting of the deal can be done by selling these shares held.

Q. Do I have to wait till expiry once I buy or sell an option or can I square up my position any time?

A. No, you can buy an option and square up the position by selling the identical option (same expiry and same strike) at any time before the contract expires. You can sell an option and square up the position by buying an identical option. You can buy first and sell later or you can

initiate your position by selling and then buying—there is no restriction on direction. The difference between the selling and buying prices is your profit/loss. The process is similar to that of trading in shares.

Q. How does an option get settled, if I have bought it and paid the premium for it?

A. You can sell an option of the same series as the one you had bought and close out /square off your position in that option at any time on or before the expiration. You can exercise the option on the expiration day in case of European Option /on or before the expiration day in case of an American option.

Q. What type of risks involved in options for buyer and writer?

A. **Option Buyer**: limited to the premium that he has paid

Option Writer: loss is unlimited but gain is limited to the premium that he has paid

Q. What are the factors that affect the price of an option premium?

A. there are following factors are that affect price of an option premium.

- Strike price/exercise price of the option
- Price of the underlying stock or index
- Volatility of the price of underlying stock or index
- Time to expiration of the option
- Risk-free rate of interest
- Dividend

	European Options Buying		American Options Buying	
Parameters	CALL	PUT	CALL	PUT
Spot Price (S)	↑	↓	↑	↓
Strike Price (Xt)	↓	↑	↓	↑
Time to Expiration (T)	?	?	↑	↑
Volatility ()	↑	↑	↑	↑
Risk Free Interest Rates (r)	↑	↓	↑	↓
Dividends (D)	↓	↑	↓	↑

↑	Favourable
↓	Unfavourable

Q. What is the impact of risk free rate of interest on option value?

A. In reality the r and the stock market is inversely related. But theoretically speaking, when all other variables are fixed and interest rate increases this leads to a double effect: Increase in expected growth rate of stock prices discounting increases making the factor price fall. In case of the put option both these factors increase and lead to a decline in the put value. A higher expected growth leads to a higher price taking the buyer to the position of loss in the payoff chart. The discounting factor increases and the future value become lesser.

In case of a call option these effects work in the opposite direction. The first effect is positive as at a higher value in the future the call option would be exercised and would give a profit. The second affect is negative as is that of discounting. The first effect is far more dominant than the second one, and the overall effect is favourable on the call option.

Q. How option pricing affected by dividend?
A. When dividends are announced then the stock prices on ex-dividend are reduced. This is favourable for the put option and unfavourable for the call option.

Q. What are the different option pricing models?

A. Different models are:

1. **The Black and Scholes Model:** The Black-Scholes model is used to calculate a theoretical call price (ignoring dividends paid during the life of the option) using the five key determinants of an option's price: stock price, strike price, volatility, time to expiration, and short-term (risk free) interest rate.

The original formula for calculating the theoretical option price (OP) is as follows:

$$d_1 = \frac{\ln\left(\frac{S}{X}\right) + \left(r + \frac{v^2}{2}\right)t}{v\sqrt{t}}$$

Where the variables are:
S = stock price
X = strike price
t = time remaining until expiration, expressed as a percent of a year
r = current continuously compounded risk-free interest rate
v = annual volatility of stock price (the standard deviation of the short-term returns over one year).
ln = natural logarithm
N(x) = standard normal cumulative distribution function
e = the exponential function

Let's assume you would like to know the value of an option to purchase one share of XYZ Company stock for Rs95. The current price of the shares is Rs100, and the option expires in three months (one-quarter year). Assuming that the stock pays no dividends, the standard deviation of the stock's returns is 50% per year, and the risk-free rate is 10% per year, we can calculate that the value of the option, even though it is out of the money right now, is as follows:

d1 = [ln(Rs100/Rs95) + (.10 + .52/2).25]/ .5√.25 = .43
d2 = .43 - .5√.25 = .18
N (.43) = .6664
N (.18) = .5714

Thus, the value of the call options is:

C0 = 100 x .6664 - 95e-.10 x .25 x .5714 = 66.64 - 52.94 = Rs13.70

We know that the above formula can be used for a call option. The Black-Scholes model can be used to price other derivatives, including puts. To value a put option (P), use the value of the call option to solve for the value of the put option, as follows:

P = C0 + PV(X) - S0
= C0 + Xe-rT - S0
= Rs13.70 + Rs95e-.10 x .25 - Rs100
= Rs6.35

2. **Binomial option pricing model**: The binomial pricing model uses a "discrete-time framework" to trace the evolution of the option's key underlying variable via a binomial

tree, for a given number of time steps between valuation date and option expiration. Each node in the tree represents a possible price of the underlying, at a particular point in time. This price evolution forms the basis for the option valuation. The valuation process is iterative, starting at each final node, and then working backwards through the tree to the first node (valuation date), where the calculated result is the value of the option.

Q. If I exercise an in-the-money call option, how soon can I sell the stock?
A. As soon as you tell your broker you would like to exercise your right to buy the stock (strictly speaking, given "irrevocable instructions") you are deemed to be a stock owner. Because of the irrevocable nature of the call exercise, you will be buying the stock at the strike price, and you can sell those shares immediately after giving instructions to exercise.

Q. In order to exercise a put or call, do I have to have cash or stock in my account to buy (in the case of a call) or sell (in the case of a put) the shares of stock that underlie the contract?

A. One way to answer your question is to ask yourself, "Which provides the highest price/lowest cost - exercising the rights of the option contract OR selling the contract back into the marketplace?"

If you exercise an option, the settlement will be in three business days, just like if you bought or sold stock on an exchange. So for example if you exercised a call and simultaneously sold the equivalent shares of stock, those transactions would offset each other. Assuming the option is in the money there should be no need to post margin for such a set of offsetting transactions. Of course, you will want to check with your brokerage firm to ensure that you are both on the same page regarding this practice.

Q. Explain Time Value with reference to Options.

A. Time value is the amount option buyers are willing to pay for the possibility that the option may become profitable prior to expiration due to favorable change in the price of the underlying. An option loses its time value as its expiration date nears. At expiration an option is worth only its intrinsic value. Time value cannot be negative.

Q. What is the Intrinsic Value of an option?

A. The intrinsic value of an option is defined as the amount by which an option is in-the-money, or the immediate exercise value of the option when the underlying position is marked-to-market.

For a call option: Intrinsic Value = Spot Price - Strike Price
For a put option: Intrinsic Value = Strike Price - Spot Price

The intrinsic value of an option must be a positive number or 0. It can't be negative. For a call option, the strike price must be less than the price of the underlying asset for the call to have an intrinsic value greater than 0. For a put option, the strike price must be greater than the underlying asset price for it to have intrinsic value.

Q. Which is better, stock options or restricted stock?
A. That depends on the change in the stock price. Generally, if the stock price is going up, stock options are a little better. You can sell both at the higher market value, but with stock options you have not had to commit to the purchase until the stock price reached the point at which you wished to sell. However, if the stock price stays the same or goes down, restricted stock is better. Since you actually own the stock, it retains some value until the stock price goes to zero.

Q. **Can an enabled contract be disabled later ?**

A. Yes, it is possible that RRFinance disables a contract that was enabled earlier. This could happen due to various reasons like the underlying is disabled as it reaches market wide open position limits, the contract has become illiquid or any other reason to safeguard the interest of investors.

Q. **Can margin be changed during the life of contract?**

A. Yes, margin % can be changed during the life of the contract depending on the volatility in the market. It may so happen that you have taken your position and 25% margin is taken for the same. But later on due to the increased volatility in the prices, the margin % is increased to 30%. In that scenario, you will have to allocate additional funds to continue with open position.

Q. How is margin calculated on Buy orders in Option?

A. Buy orders irrespective of whether it is a Call or a put, is margined only to the extent of the Premium payable on the order. is a different contract For e.g. If you place a Buy order in OPT-ACC-30-June-2010-150-PA for 1500 quantity at a Limit price of 20 would attract margin of

Quantity * Price at Rs 30,000/-.

Q. How is Margin calculated on Sell orders in option?

A. Since the seller of the option is exposed to a higher risk than the buyer of an option, the margin calculation is slightly different as compared to Buy orders. RR Finance would specify a Margin percentage as it feels is commensurate with the volatility and the current position of the Stock or the Index. This percentage would be applied to the Current Market Price (CMP) of the shares/Index in the Underlying Market.

Q. Is margin blocked on all Options Orders?

A. No. Margin is blocked only on orders, which result in an Increased Risk exposure. Margin is not recovered from an order, which is cover in nature. However in case of buy cover order where the premium exceeds the margin blocked, extra margin is required for placing the order. If a Position of opposite nature is present then the Order is reduced by the opposite position, if the opposite position is greater than the order, then the order is not margined at all.
For e.g.

a) if you have a Buy position of 4500 in OPT-STABAN-25-Jul-2010-210-CA, and you place a sell order of 3000 then the sell order becomes non-marginable.

b) If you have a sell position in OPT-NIFTY-27-May-2010-1700-CA, and the margin blocked is Rs.45,500.00 and a cover buy order is placed which requires total premium of Rs.65000.00, then extra margin to the extent of Rs. 14500.00 (65000-45500) is required.

Q. **What kind of settlement obligation will I have in Options?**

1. Brokerage: Any Transaction you enter into will attract brokerage. Brokerage is debited to your account at the end of the day.
2. Premium payable or Receivable
3. Profit on Exercise
4. Loss on assignment

Q. On T+1 day I have a pay in for a particular trade date and also payout for a different trade date? Will pay in and payout be run separately?

A. No, if pay in or payout falls on the same date, the amount is internally set off and only the net result pay in or payout will be debited or credited to your bank account.In cash projection, distinct particulars would be given for pay in/payout internally settled and settled by way of debit/credit in bank.

Q. Is there any hedging benefit between options?

A. No. Currently RR Finance is offering hedging/spread benefit within Options. Thereby customers are advised to monitor all the options positions as independent positions and allocate margin for all individual open Option positions (if additional margin is required).

Q. What are Option Greeks?

A. Option Greeks are mathematical outputs from an Option Valuation Model which help you to understand the possible future movement in Option Values based on various underlying parameters. Greeks help you in possible predictions of Option Values and help you to fine tune your buy sell hedge decisions much better. While Greek formulae look heavily mathematical and formidable, they are not as difficult as they appear.

Q. Which are the common Greeks used?

A. The common Greeks are Delta, Gamma, Vega and Theta.

Q. What does Gamma stand for?

A. Gamma stands for the change in Delta itself for a given change in the share price. Technically, it is called a second order derivative. Let us take an example. For a given share price, the Delta of an Option is currently 0.65. The Gamma at the moment is 0.02. This means: If the share price moves up by Re 1.00, the Option Value will move up by Rs 0.65 (meaning of Delta as discussed above). When this happens, the Delta itself will become 0.67 (i.e. 0.65 as earlier plus 0.02). Thus, the Gamma predicts movements in Delta given changes in the underlying share price.

Q. What does Delta indicate?

A. Delta stands for the change in the Option Value for a given change in the price of Shares. For example, if the Delta of a Call Option is 0.65, the meaning is: If the share price moves up by Re 1.00, the Call Option will rise up by Rs 0.65. Call Option Deltas are by definition positive indicating that a rise in share price will also result in a rise in the Option Value. Put Option Deltas are by definition negative, indicating that a rise in share price will result in a fall in the Put Option Value.

Q. What does Vega indicate?

A. Vega indicates impact of Volatility. As we have discussed earlier, Volatility has a positive impact Option Values. Both Calls and Puts will increase in Value if Volatility rises and fall in Value if Volatility falls. Vega determines the increase or decrease in Value with precision.

For example: if Vega is 0.09, the meaning is that the Option Value will rise by Rs 0.09 for an increase of 1% in Volatility. If the current Volatility of Wipro is 35% and the Value of an Option is Rs 11, the implication is that were the Volatility to move up to 36%, the Option Value would rise to Rs 11.09. Conversely, if Volatility were to fall, the Option Value will correspondingly decrease.

Q. What does Theta stand for?

A. We have discussed earlier that Option Values will decrease with passage of time. The Time Value component of the Option will gradually move down to zero on expiry day. Theta determines precisely how much the value of the Option will decrease by passage of time. For example, if the Theta of an Option is –0.17, this means the value of this Option will decrease by Rs 0.17 on passage of one day.

Q. Are there other Greeks?

A. There are other Greeks like Rho and third order derivatives which are not very practical for the Indian scenario right now. The relevance of such Greeks would be applicable in a highly sophisticated market and for institutional players. For retail investors, the four Greeks discussed above should suffice.

Q. How do I apply these Greeks in my investing practice? Shall we deal with application of Delta first?

A. Delta is the most important Greek and the most commonly applied one. Delta tells you how much the Option will move. In most cases, you have a view and you have chosen to trade in Options based on that view. You will however make a profit only if the Delta is sensitive enough.

Let us take an example. Wipro is currently quoting at Rs 235. You have a choice of various Call Options as under. You are bullish on Wipro

Strike Prices	Option Value	Delta
200	48	0.80
220	28	0.55
240	8	0.45
260	4	0.25
280	2	0.05

A common question which arises in most minds is which Option should I buy?

Q. Why? Option Prices are supposed to move up when the Share price moves up?

A. Yes, you are perfectly right. But look at the Delta. The Delta is only 0.05. This implies that for Wipro moving up by Rs 13 (Rs 235 to Rs 248), the Option Value will move up by Rs 13 * 0.05 i.e. Rs 0.65. In the meantime, there is the impact of Time on the Option. 10 days have passed out of a total of 15 days. Hence, the Time value would have reduced. Thus, it is most probable that the Option is quoting below Rs 2 at that time.

Now do you realize what the Delta is telling you? It is telling you that though you are bullish, though you might be right in your view, this particular Option is not sensitive to mild or moderate bullishness at all. You will lose money here.

Q. Which one would most retail investors buy?

A. Many investors buy the far out of the money call (Strike Price 280) on the ground that it is cheap (only Rs 2).

Q. Which Option should I buy then?

A. If you are mildly bullish or moderately bullish, you should go in for the in-the-money options or at-the-money options. These will rise faster and smartly with the underlying price rising. Further, you might find that the deltas improve with passage of time.

Technically, you can understand that you are almost buying the share itself (but a fraction of the price) if you buy high delta Options. For example, if you buy the Wipro 200 Strike Call (with a Delta of 0.80), you are almost buying Wipro itself but at a price of Rs 48 rather than Rs 235. If Wipro moves upto to say Rs 250 in the next 10 days, the Option value will move up by 80% of that appreciation (i.e. Rs 12). Of course, the value will get diluted due to passage of time too. But the basic appreciation is much higher than the Rs 280 call.

It is believed that most professional players buy in the money and at the money options while amateurs buy out of the money options. As a result, amateurs might be losing most of the time.