It is the study of how living things receive common traits from previous generations. For example, children usually look like their parents because they have inherited their parents' genes. Genetics tries to identify which traits are inherited, and explain how these traits are passed from generation to generation.

Chromosomes are like walls in a room and genes are like bricks in the walls which are made up of genetic material. Most cells have 23 pairs of chromosomes for a total of 46 chromosomes. Sperm and egg cells each have 23 chromosomes. During fertilization, when the egg and sperm join, the two sets of chromosomes come together. In this way, one half of a baby's genes come from the baby's mother and one half come from the baby's father.

Genes constitute a segment of DNA that contains instructions for the development of a person's physical traits and control of the processes in the body. They are the basic units of heredity and can be passed down from parent to offspring.

Mutations are random changes in genes.

What is a genetic condition?

Genetic conditions are problems that can occur either because of a problem with the chromosomes such as Down's syndrome, or with the individual genes for example, beta thalassemia.

What causes genetic disorders?

.A genetic disorder can happen if the parents carry the defective genes(carriers) and pass on to their babies or when a defect in the gene occurs in the baby alone for unknown reasons

Why is my baby having a genetic test?

Your baby may be offered a genetic test for a number of different reasons.

There is a family history of a genetic condition

Abnormalities pointing towards a genetic condition may be identified on ultrasound scan or blood tests

What is genetic counselling?

In some situations, you may be referred to a genetic counsellor. A genetic counsellor has special training in genetics. In addition to studying your family health history, he or she may refer you for physical exams and tests. Using this information, the counsellor will assess your baby's risk of having a problem, discuss your options, and talk about any concerns you may have.

What does the genetic test involve?

Genetic tests usually involve extracting a placental sample(CVS), amniotic fluid (Amniocentesis) or a blood sample (Fetal blood sampling) from the baby by an invasive testing and the material is sent to the laboratory for further analysis. Some genetic tests may be available within a few days; others may take weeks and some several months. The doctor ordering the test will tell you when to expect the results and how the result will be given to you.

When is the right time to have a genetic test?

If there is a family history of a genetic disorder example either of the parents or other siblings are suspected to have a genetic disorder,it is advisable to have a thorough genetic evaluation of the parents and the siblings prior to the next pregnancy to exactly know what the genetic condition is and to know the chances of transmititing it to your baby and what can be done about it as all genetic evaluation takes anywhere from 4-6 weeks or longer.