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Based on NCERT patterns

MOLECULAR BASIS OF INHERITANCE

Draw the diagram of DNA with nitrogenous base .

DNA- Deoxyribonucleic Acid is considered as the molecule of inheritance as it carries genetic information in all living organisms. It is a long polymer chain of **deoxyribonucleotides**. Its length depends on the number of nucleotide base pair present in it.

Watson and Crick were the first scientists who proposed a double-helical model for DNA, based on X-ray crystallography of the molecule. Each strand of DNA is a polymer of nucleotides, every nucleotide consists of a deoxyribose sugar, a nitrogen base and a phosphate.

According to the central dogma of molecular biology, the genetic information flows from DNA to RNA to Protein.

The complete . looks like a twisted ladder. The two strands of DNA are held together by weak hydrogen bonds between the nitrogen bases. A purine base, always pairs with a pyrimidine base, i.e., adenine (A) pairs with thymine (T) and guanine (G) pairs with cytosine (C).

Draw the Structure Of Polynucleotide

A nucleotide consists of three elements – nitrogenous base, sugar and phosphate group. Nitrogenous bases are in the form of purines(Adenine, Guanine) and Pyrimidines(Cytosine and Thymine). the sugar part is constituted by the pentose sugar(ribose in RNA and deoxyribose in DNA) while the phosphate group is constituted by the nucleoside and nucleotide.

