

2022

Q: Differentiate b/w DNA and RNA.

DNA:

Deoxyribonucleic acid is a nucleic acid containing the genetic material used in development and functioning of all living organisms.

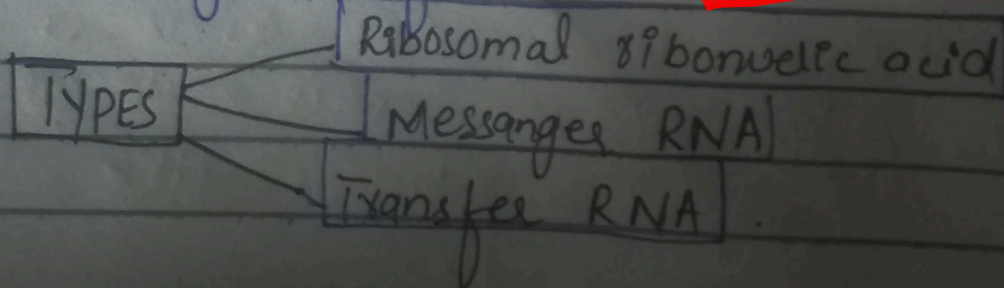
A DNA molecule resembles the twisted ladder. A sugar phosphate backbone forms the sides of the ladder. The phosphate group is covalently bonded with hydroxyl group on the sugar to the next. Hydrogen bonding between bases creates the rungs of the ladder.

RNA

RNA consists of a chemical compound called nucleotides. Each nucleotide is made up of sugar molecules called ribose, a phosphate group and four different nitrogen containing compounds called ribose base.

The four bases are guanine, adenine, uracil and cytosine.

Three types of RNA



Add diagrams

And molecular structure diagrams

DIFFERENCE

DNA

- ① DNA stands for Deoxy-ribonucleic acid
- ② DNA have double helix strands with a long chain of nucleotide.
- ③ DNA is of six form
- ④ DNA contains four nitrogenous base: Thymine, guanine, adenine, cytosine.
- ⑤ In DNA pairing occurs like A-T, G-C
- ⑥ DNA present in all eukaryotes
- ⑦ DNA have Deoxyribose sugar
- ⑧ DNA is present in the nucleus
- ⑨ DNA prepares copies through a process called Replication

RNA

- RNA stands for ribonucleic acid.
- RNA have single strand and with a small chain of nucleotide.
- RNA is of three types
- RNA contains four nitrogenous bases: Guanine, adenine, cytosine, Uracil.
- In RNA pairing occurs A-U, G-C.
- RNA is also genetic material for some bacteria and viruses.
- RNA have ribose sugar.
- RNA is present in the nucleus and cytoplasm.
- DNA prepares copies of mRNA through a process called Transcription