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 **THE CHARACTERISTICS OF THE GENETIC CODE**

1. Degenerate nature: There are 61 codons for 20 amino acids, but some amino acids are coded by more than one codon. Hence it is said to be degenerate eg GGG, GGA, GGC and GGU are all code for glycine
2. Commaless: Genetic code is commaless, this means that the arrangement of triplet codons on mRNA is one after another without a gap
3. Universality: Genetic code is universal for all the organisms from simple bacteria to complex organisms
4. Polarity: Genetic code could be read only in 5’-3’ direction on mRNA. This polarity is the important aspect of the genetic code. It has ‘start’ and ‘stop’ signals. Start for initiation codon is AUG while UAG, UAA, UGA are the stop for termination code
5. Non-ambiguous nature: Each codon specifies a particular amino acid. The only exception is AUG which codes for Methionine and GUG and codes for valine. But in the absence of AUG, GUG can also code Methionine
6. Non-overlapping: The genetic code is non-overlappin, i.e the adjacent codons do not overlap. A non-overlapping code means that the same letter is not used for two different codons. In other words, no single base can take part in the formation of more than one codon
7. Triplet nature: Single and double cods are not adequate to code for 20 amino acids, therefore, it was pointed out that triplet code is the minimum required