* Degeneracy of genetic code, concept & mechanism of wobbling phenomenon :-

→ Degeneracy of genetic code :-

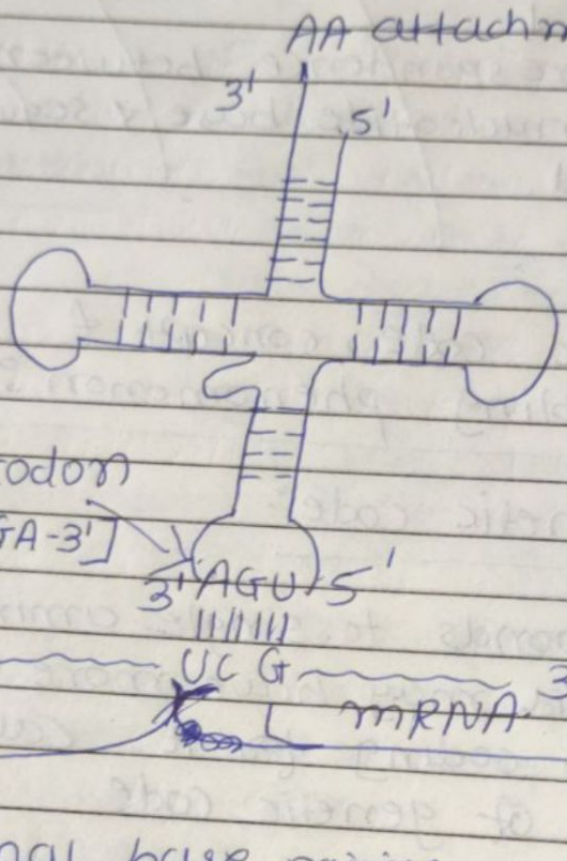
Each code corresponds to single amino acid, A given amino acid may have more than one triplet coding for it. called degeneracy of genetic code.

→ Concept & mechanism of wobbling phenomenon

Wobble hypothesis :- Mechanism by which tRNA can recognize more than one codon for a specific amino acid

- Codon - anticodon pairing follows traditional Watson - Crick rules for first two base of codon
  e.g. guanine pair with cytosine
  Adenine pair with uracil
- less stringent for last base.
- Base at 5' end to anticodon (1st base of anticodon) is not as spatially defined as other two bases.
- Movement of that first base allows nontraditional base pairing with 3'-base of codon (last base of codon) → called wobble.

Advantage - allow single tRNA to recognize more than one codon
- 61 tRNA species not required to read 61 codon that code for amino acid



Traditional base pairing observed in 1st & 2nd position of codon

Nontraditional base pairing possible between 3' position of codon & first (5') position of anticodon