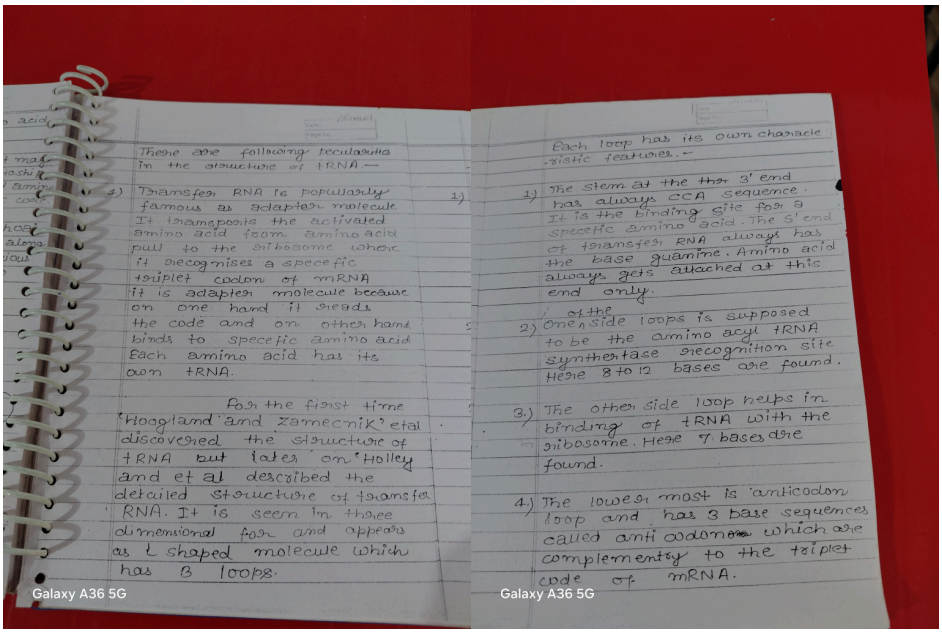

There are following peculiarities in the structure of tRNA —

1) Transfer RNA is popularly famous as adapter molecule. It transposes the activated amino acid from amino acid pull to the ribosome where it recognises a specific triplet codon of mRNA it is adapter molecule because on one hand it reads the code and on other hand binds to specific amino acid Each amino acid has its own tRNA.

For the first time 'Hoagland' and 'Zamecnik' etal discovered the structure of tRNA but later on 'Holley and et al described the detailed structure of transfer RNA. It is seen in three dimensional form and appears as L shaped molecule which has 3 loops.

Galaxy A36 5G

Each loop has its own characteristic features. —

1) The stem at the the 3' end has always CCA sequence. It is the binding site for a specific amino acid. The 5' end of transfer RNA always has the base guamine. Amino acid always gets attached at this end only.

2) One side loops is supposed to be the amino acyl tRNA synthetase recognition site Here 8 to 12 bases are found.

3) The other side loop helps in binding of tRNA with the ribosome. Here 7 bases are found.

4) The lower most is anticodon loop and has 3 base sequences called anti codons which are complementry to the triplet code of mRNA.

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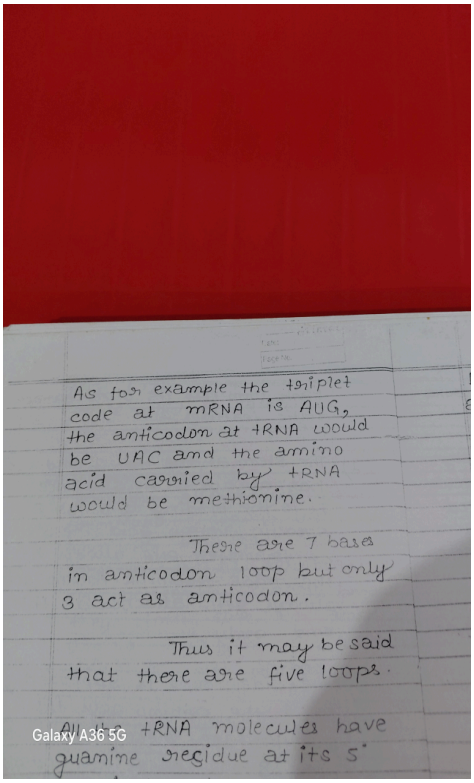

As for example the triplet code at mRNA is AUG, the anticodon at tRNA would be UAC and the amino acid carried by tRNA would be methionine.

There are 7 bases in anticodon loop but only 3 act as anticodon.

Thus it may be said that there are five loops.

All the tRNA molecules have guamine residue at its 5'