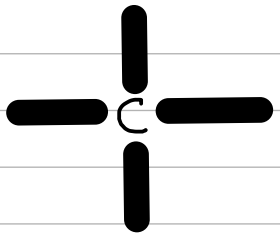
Chapter 1
Classification of Amino acid

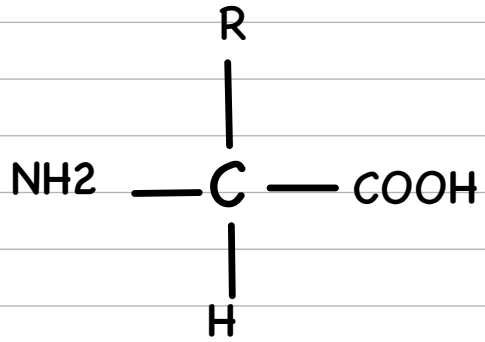
Structure of amino acid



Concept of α-amioacid

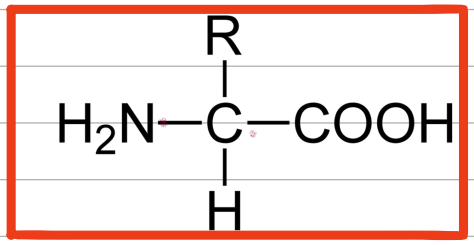
C – C - C - C - C - COOH

Apply this concept of Amino Acid (AA)



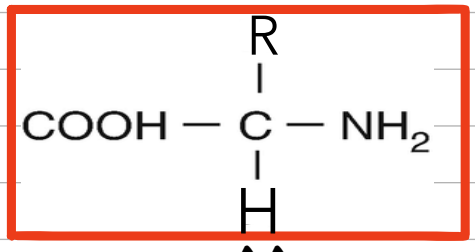
So most of AA are found in .....- form except -

Concept of D & L Amino Acid



-AA

Found in -

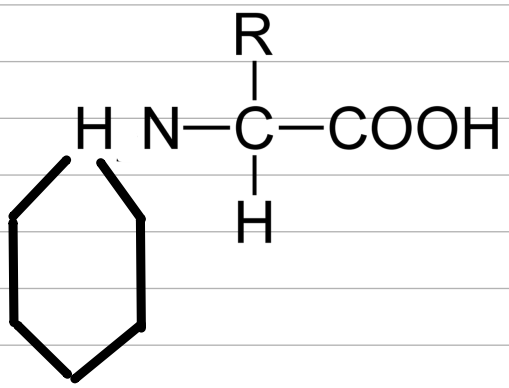


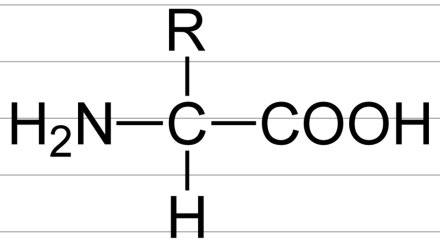
- AA

Found in -

🤔 So antibiotics are structured against - .....- AA.

Imino acid

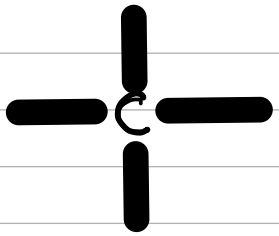




NH2 (amino group) is NOT free, instead bound -

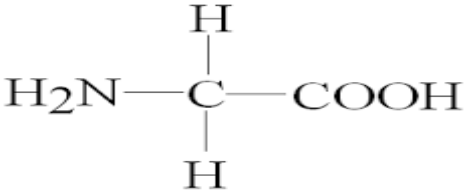
Eg of imino acid

Concept of Chiral carbon



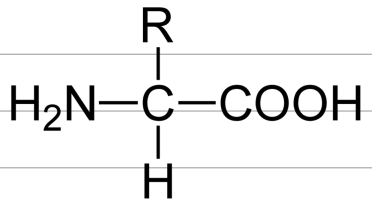
Chiral carbon is required to make -

Structure of Glycine AA



Classification of AA

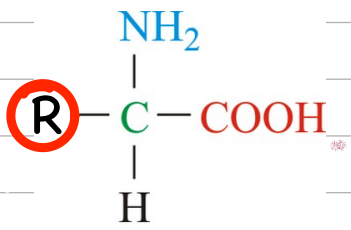
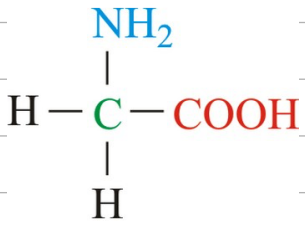
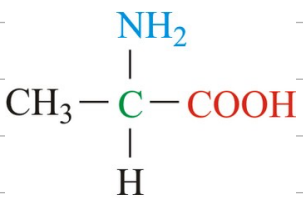
A) Based on -



1) Simple AA-

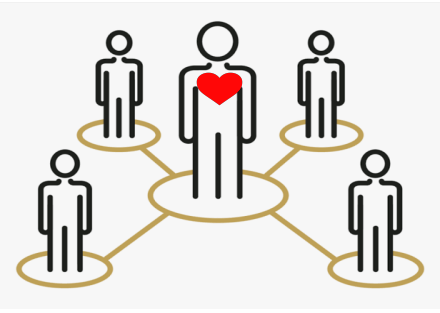
Eg-

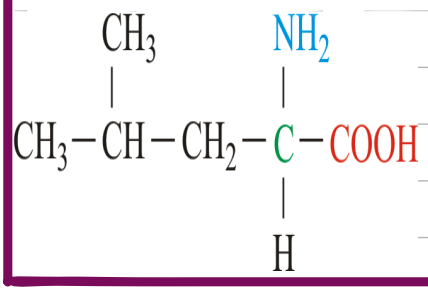
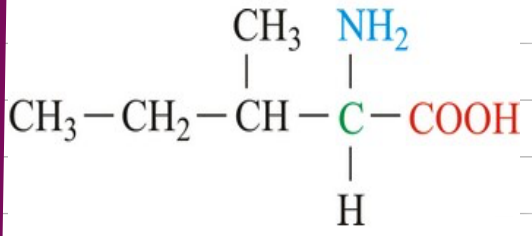
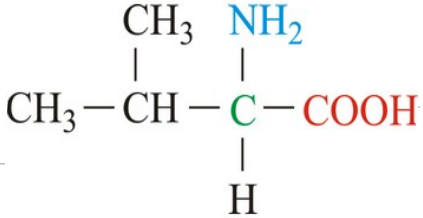


2) Branch chain AA

Eg.-



3) Hydroxyl(-OH) group containing AA

Eg.-

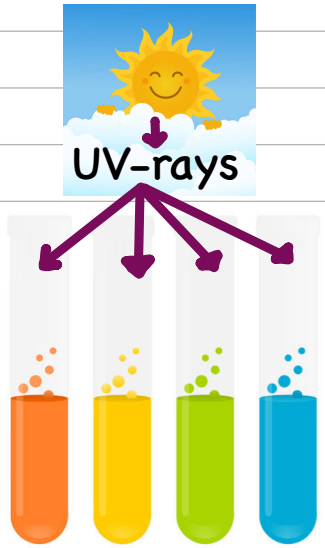
4) Sulphur containing AA.

Eg.-

5) Aromatic AA-

Eg.-





Max. UV absorption is seen with-

All aromatic AA have. - ..... chiral carbon.

6) Acidic AA or Charged AA

Eg.-

7) Amide group containing AA

Eg.-

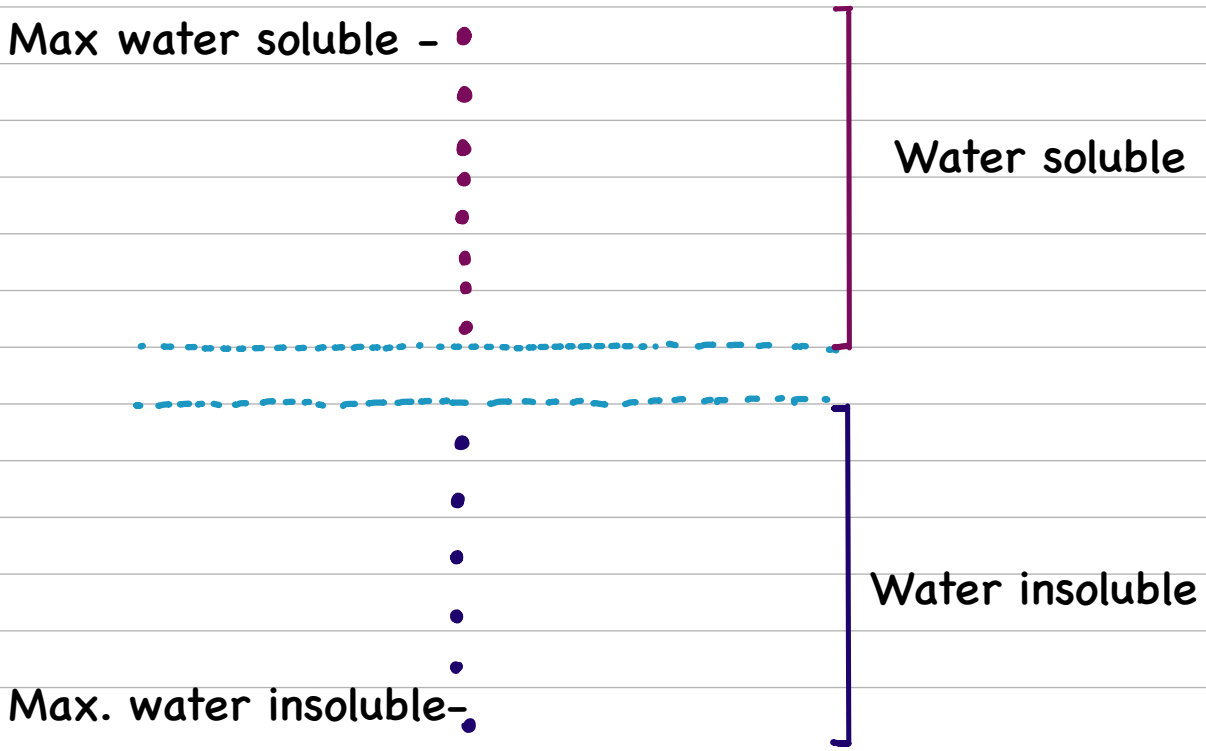
8) Basic AA or. Charged AA

Eg.-

Most basic AA-

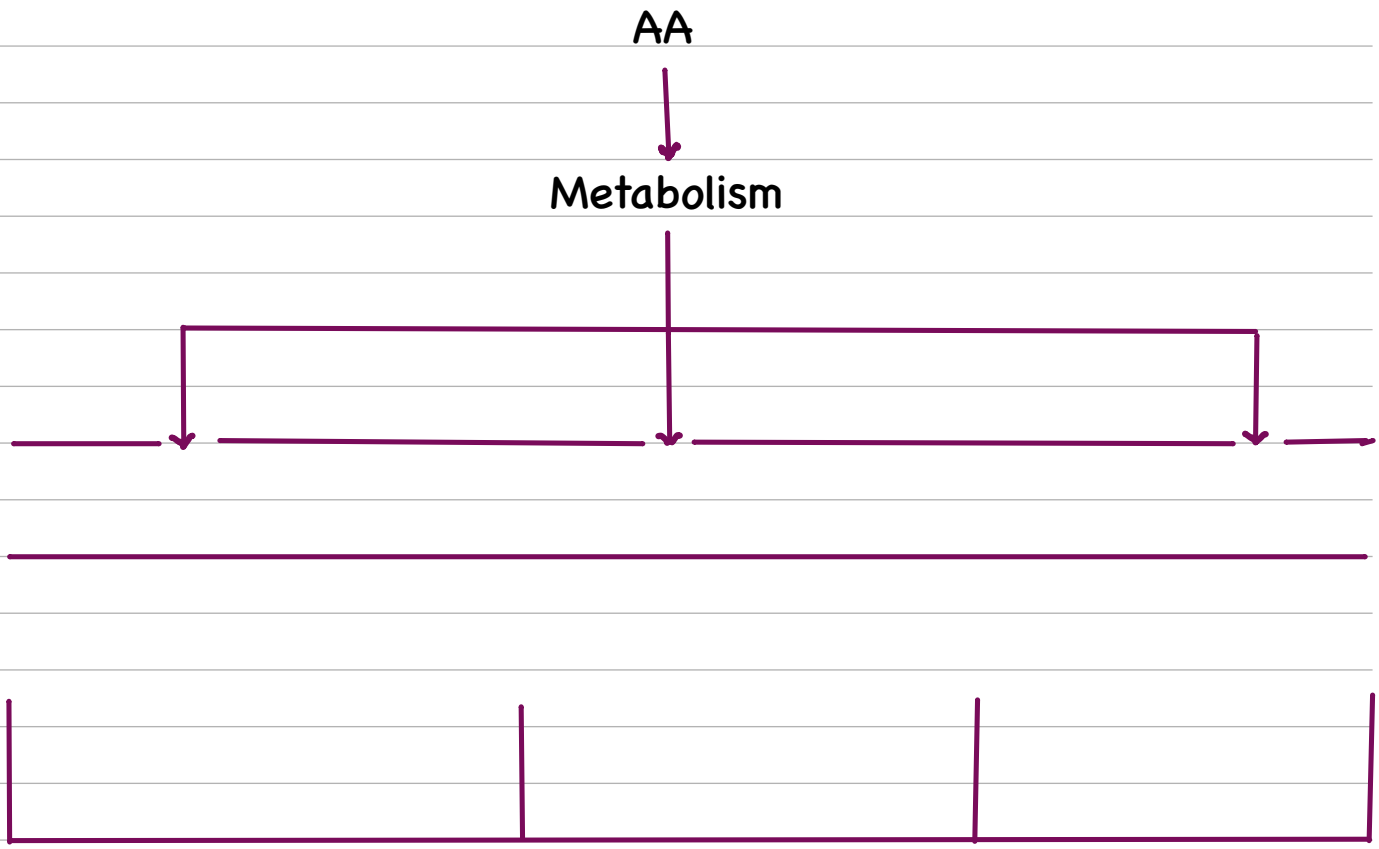
B) classification of AA- based on water solubility or polarity





🤔 Identify waterinsoluble	🤔 Identify waterinsoluble
A) serine	A) serine
B) threonine	B) threonine
C) isoleucine	C) aspartic acid
D) tyrosine	D) tyrosine

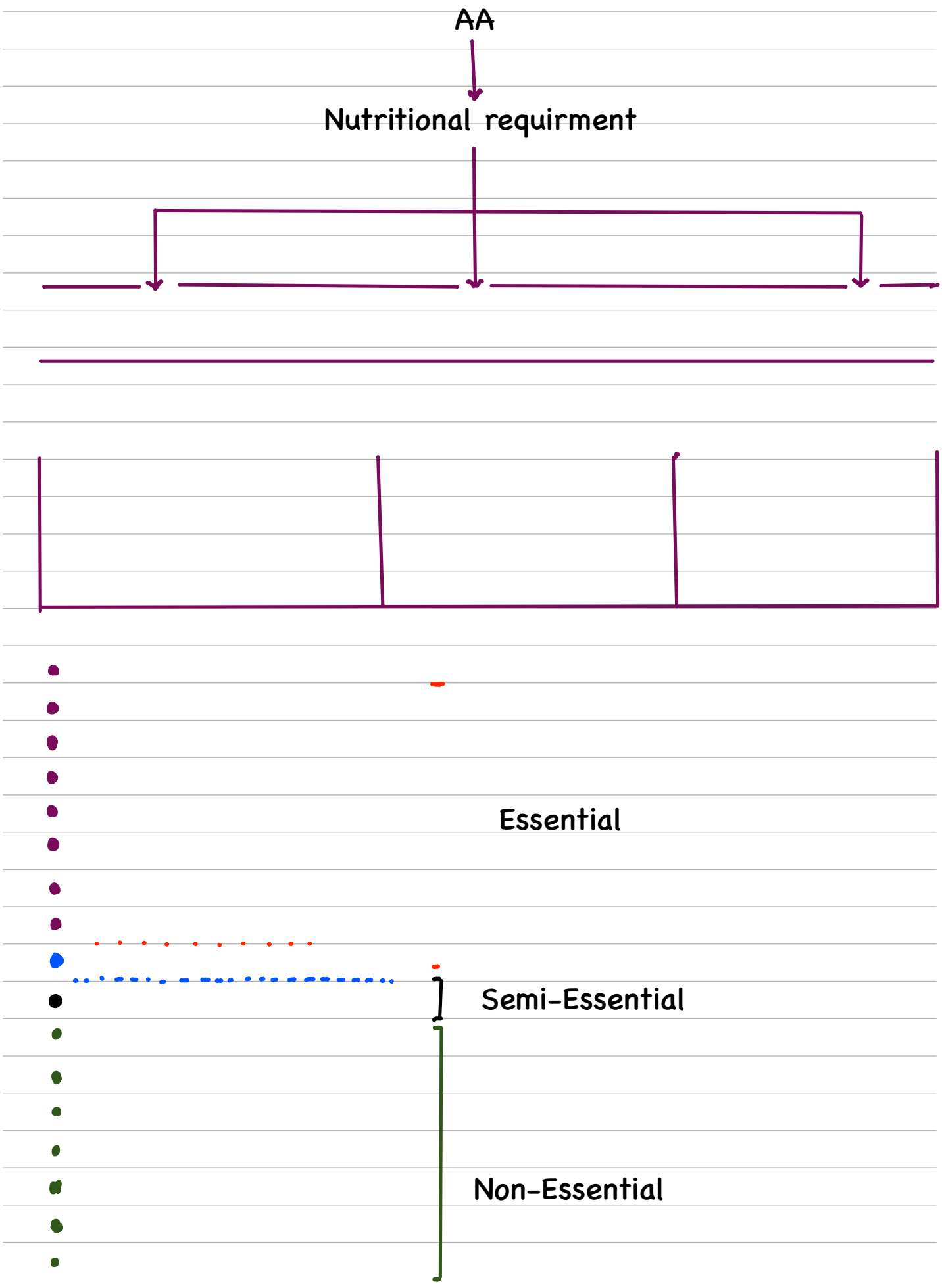
C) classification of AA- based on metabolism



Most ketogenic AA -

Most glucogenic AA -

D) Classification of AA- based on nutritional requirment



Q) identify non-essential AA.	Q) identify non-essential AA.	Q) identify non-essential AA.
a) tryptophan	a) tryptophan	a) tryptophan
b) threonine	b) threonine	b) threonine
c) tyrosine	c) histidine	c) histidine
d) methionine	d) arginine	d) methionine

Also know :

21st AA-

22nd AA-

Summary -

1- alcohol containing AA - _____ / _____ .AA
2- max uv absorption - _____ AA
3. highest ph - _____ AA
4. most basic AA- _____ AA
5 most water soluble AA - _____ AA
6. most water insoluble AA - _____ AA
7. Codon of 22nd AA - _____
8. Most ketogenic AA - _____ AA
9. Most glucogenic AA- _____ AA
10. AA which does not have chiral carbon - _____ AA
11. Eg. of imino acid - _____ AA