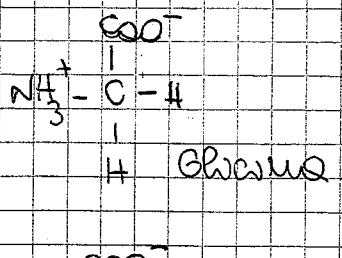
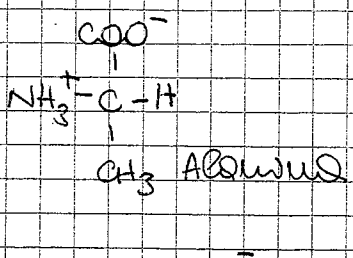
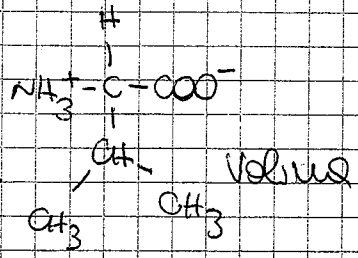
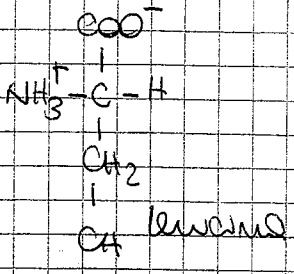
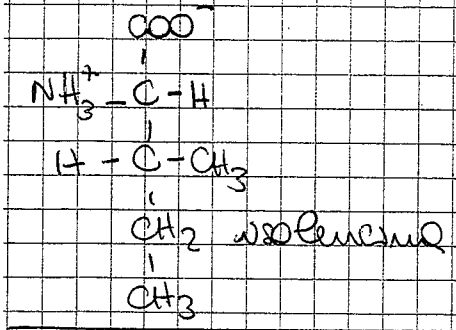
ALIFATICI

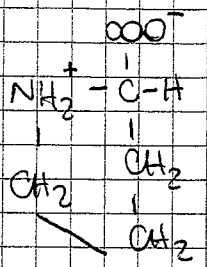

Glicina


Alanina

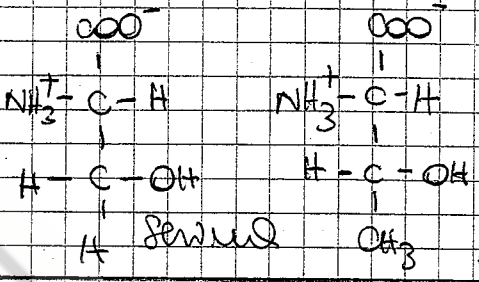

Valina


Leucina


Isoleucina

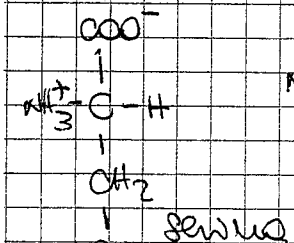

Prolina

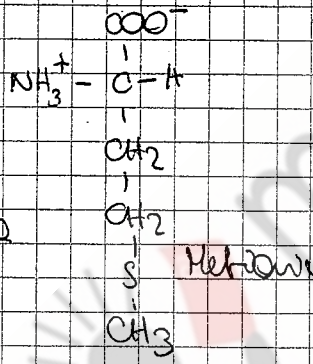
ALCOLICI:


Serina

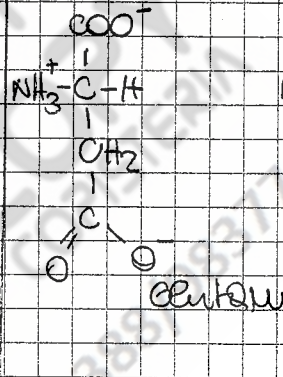
Treonina

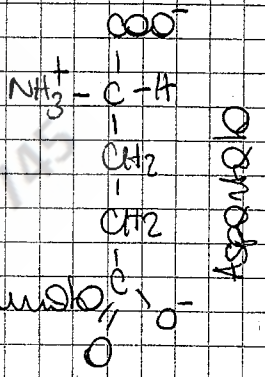
AMMINOACIDI CON S SULLA CATENA LATERALE


Cisteina

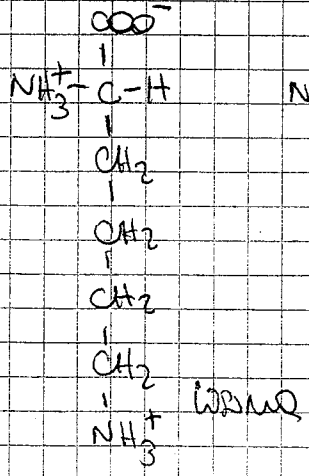

Metionina

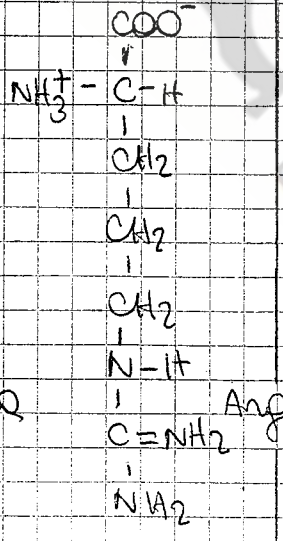
AMMINOACIDI ACIDI


Glutammato

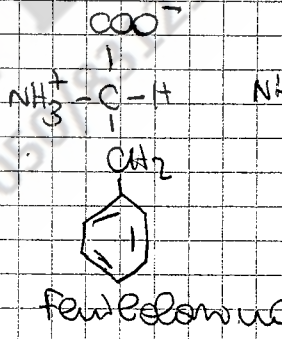

Aspartato

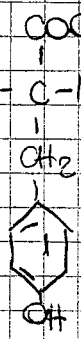
AMMINOACIDI BASICI

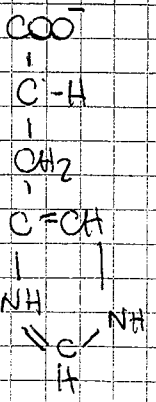

Lisina

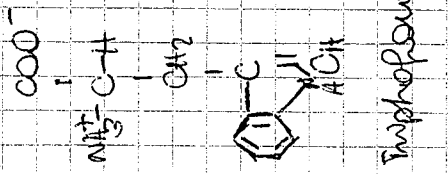

Arginina

AMMINOACIDI AROMATICI


Fenilalanina

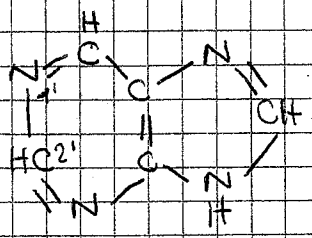

Tirosina


Triptofano

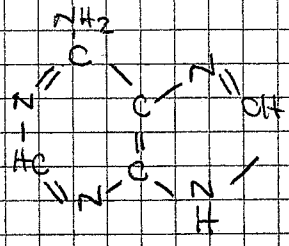

Triptofano

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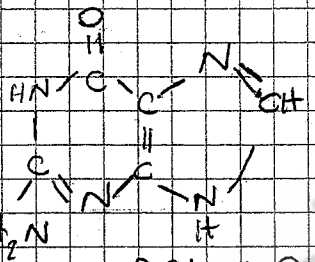
Purina



Adenina



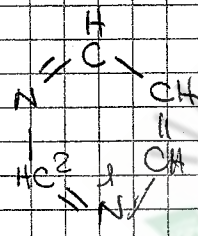
Guanina

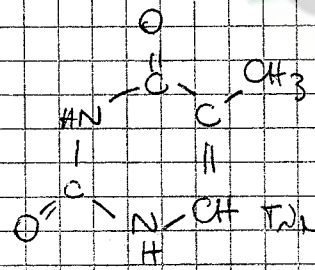


6 amino purina

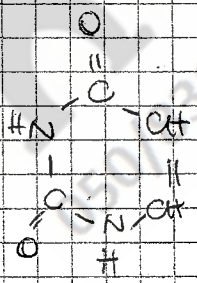
2 amino 6 oxi purina

Pirimidina





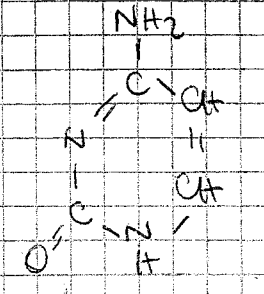
Timina



Uracila

2,4 dioxi pirimidina

2,4 dioxi 5 metil pirimidina



Citosina

2 oxi 4 amino pirimidina

Gli esseri viventi sono costituiti a base di entropia che tendono a mantenere la propria struttura e ordinata.

chimica organica → chimica del carbonio (90% dei composti)

C $1s^2$ $2s^2$ $2p^2$ 4 e^- sul livello

Molecole stabili → 4° gruppo può esserno.

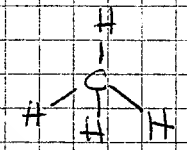
↑↓ ↑↓ ↑ ↑ ST. FOND. → formano lunghe catene

1S 2S 2px 2py 2pz

↑↓ ↑ ↑ ↑ ↑ ST. ECCITATO

1S 2S 2px 2py 2pz

Composto più semplice del carbonio → METANO



Tutti i legami tranne quello ionico a temperatura ambiente si scaldano spontaneamente.

I legami covalenti sono stabili in acqua.

Il legame ionico è forte se non in acqua, la forza di questo legame dipende dall'ambiente circostante In soluzione acquosa è debole.

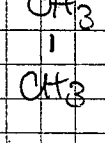
In genere le sostanze covalenti è forte.

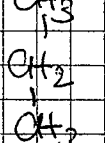
C e H → idrocarburi

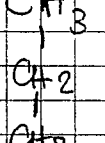
Gli idrocarburi in cui il carbonio forma sempre 4 legami sono gli ALCANI. I fondamentali sono:

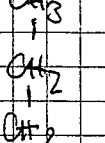
metano, etano, propano, butano, pentano.

CH_4

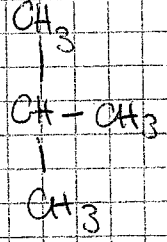




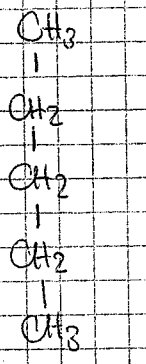




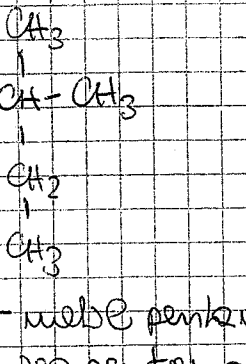
Isomeri → stessa formula bruta ma formula di struttura diversa (diverse proprietà chimiche)



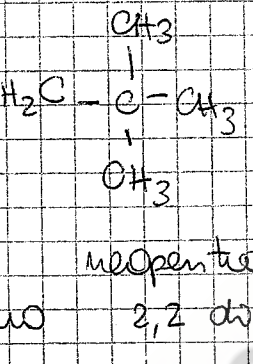
ISOBUTANO oppure 2 metil-propano



n-pentano



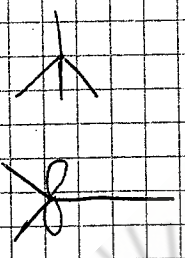
2-metil pentano
iso pentano

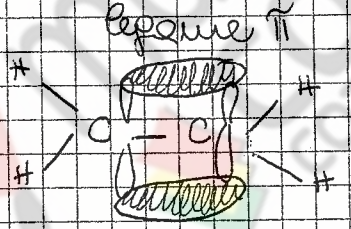


neopentano
2,2 dimetil-pentano

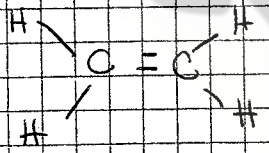
sp^3

sp^2



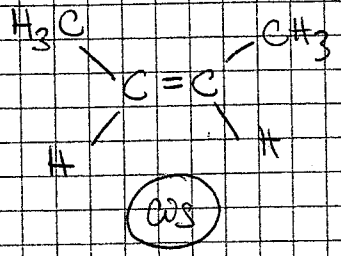


Molecole con doppio legame → ALCHENI

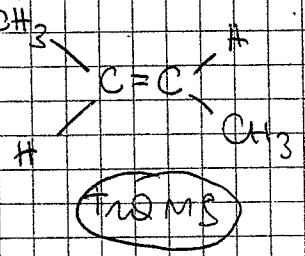


$CH_2 = CH_2$

ISOMERIA GEOMETRICA

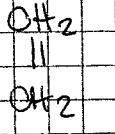


cis

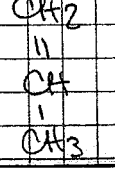


trans

Il doppio legame non permette la rotazione attorno all'asse del legame quindi compare la nuova isomeria



ETENE (ETILENE)



PROPENE (PROPILENE)

PROTEINE

GLI AMMINOACIDI

Sono l'unità fondamentale (monomeri) delle proteine. Sono molecole organiche che nella loro struttura recano sia il gruppo funzionale che delle ammine ($-NH_2$) sia quello dell'acido carbossilico ($-COOH$). Gli α-amminoacidi sono quelli in cui il gruppo amminico è legato al carbonio α, cioè l'atomo di carbonio legato al gruppo carbossilico. Ogni amminoacido presenta uno specifico gruppo caratteristico (gruppo R). In funzione alle proprietà chimiche di tale gruppo un amminoacido si classifica come acido, basico, idrofilo (o polare), idrofobo (o apolare).

STEREOISOMERI → Se carbonio forma 4 legami con differenti tetraedro nello spazio, ci sono molecole organiche che non differiscono per il numero di atomi, ma soltanto per la loro disposizione all'interno delle molecole. Gli stereoisomeri sono isomeri speculari tra loro che hanno le stesse proprietà fisiche e chimiche tranne che per l'interazione con la luce polarizzata. Si usa la seguente nomenclatura:

PROIEZIONE DI FISCHER

