

Osazone Formation

DEGREE-II (HONS.)

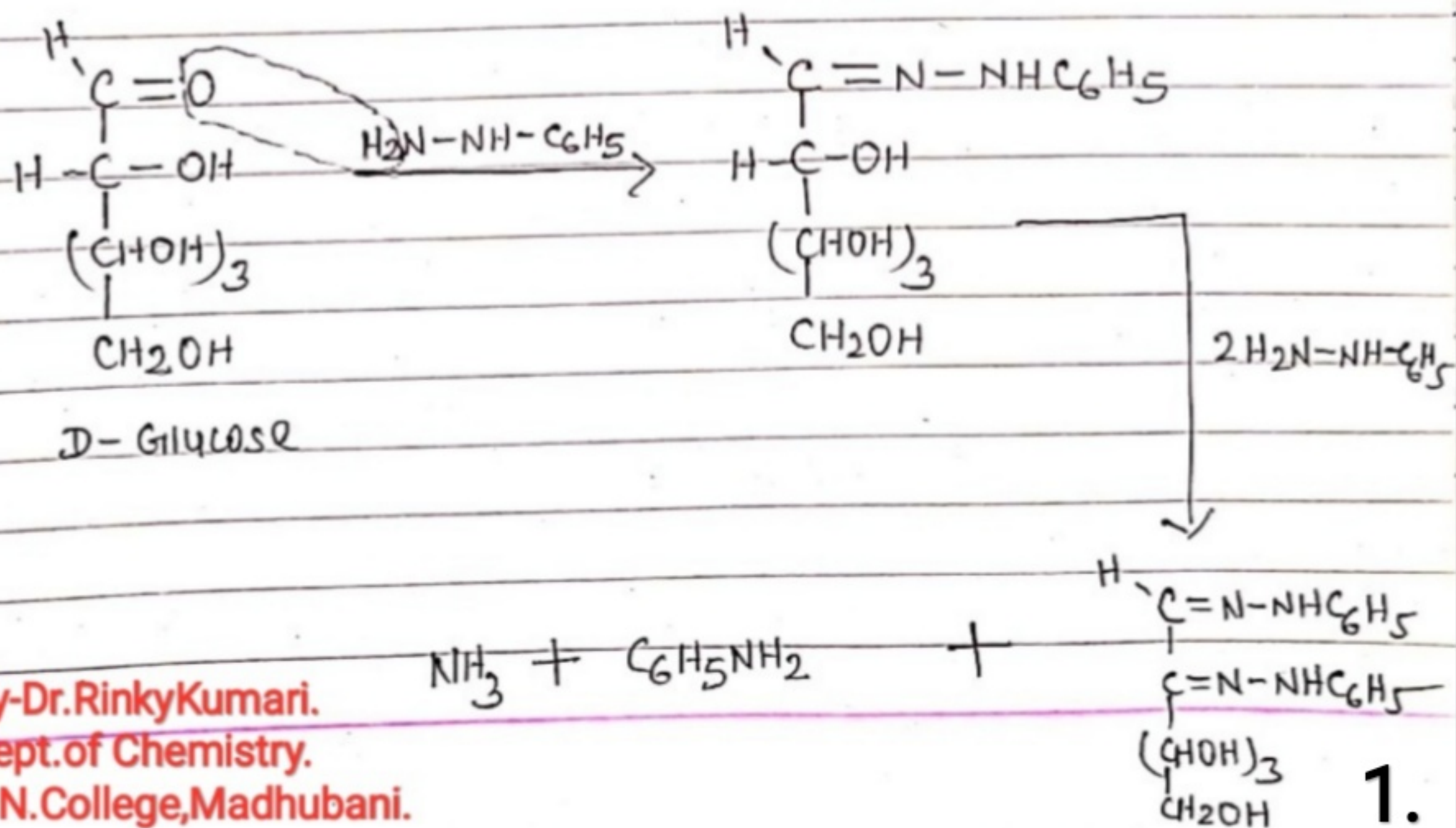
28/10/2020

Reaction with phenylhydrazine (OSAZONE FORMATION)

D-Glucose reacts with phenylhydrazine to give the soluble D-glucose phenylhydrazone.

However in the presence of excess phenylhydrazine the phenyl hydrazone reacts further to form dihydrazone called D-glucosazone, aniline and ammonia.

This reaction was discovered by Emil Fischer in 1887.



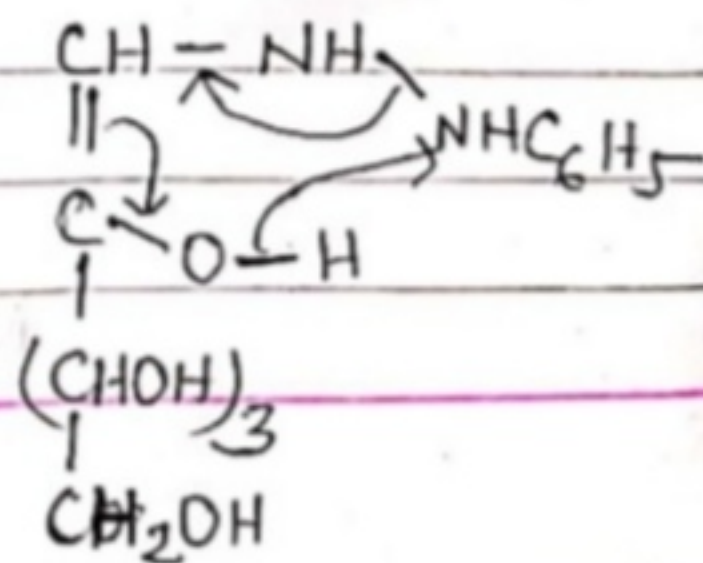
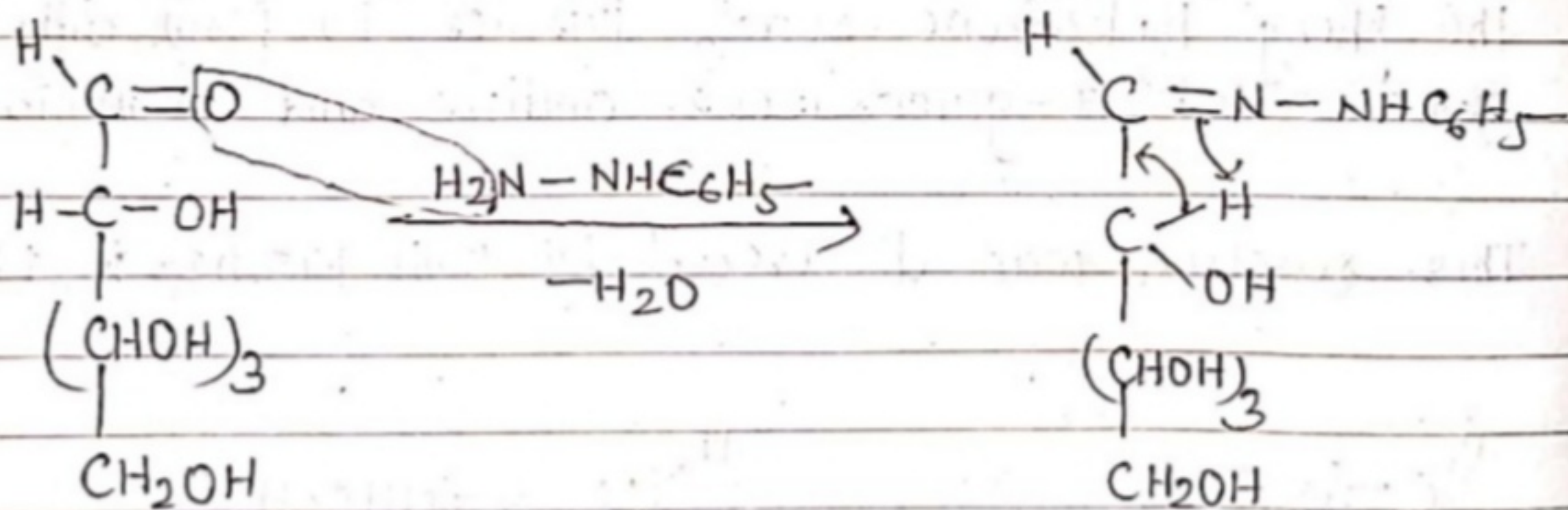
Mechanism

2.

Proposed by Weygand and Semyakin (1965)

According to this mechanism, the first formed phenyl hydrazone undergoes a rearrangement through a cyclic intermediate in which the secondary hydroxyl at C-2 becomes a ketone group.

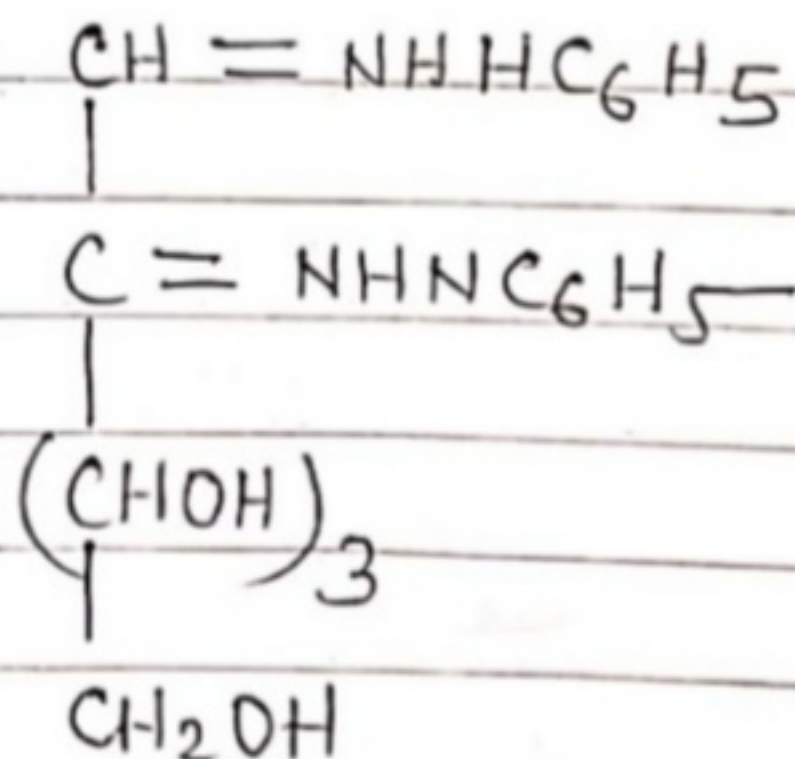
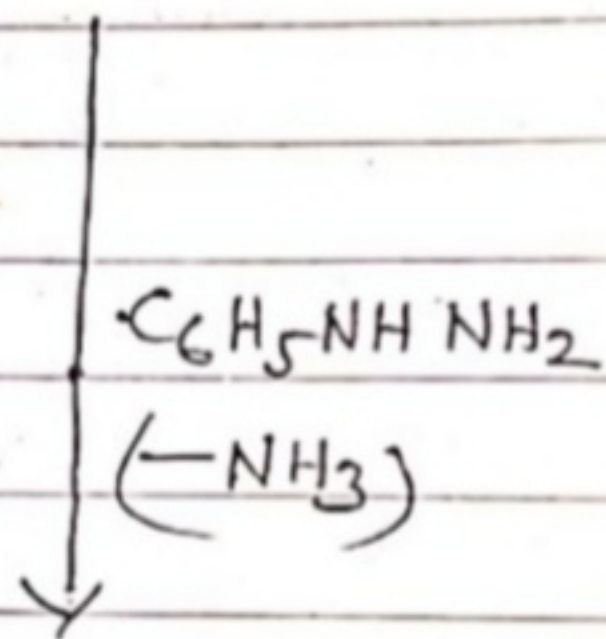
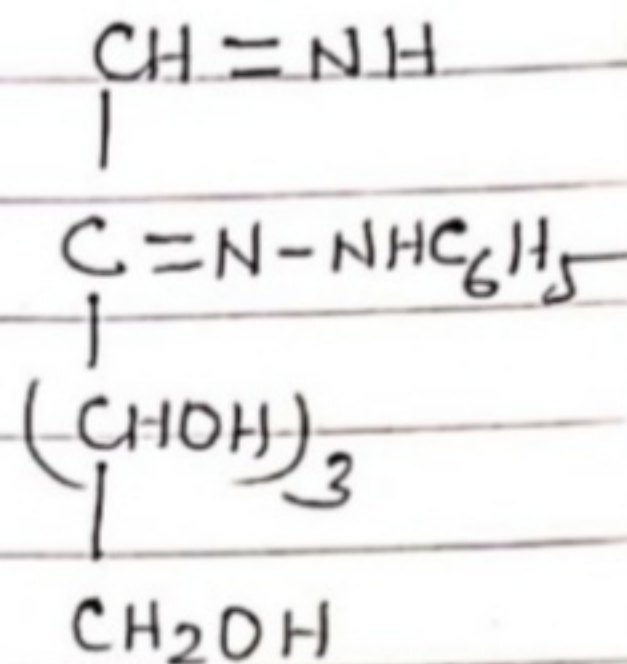
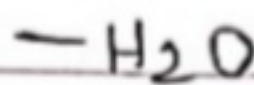
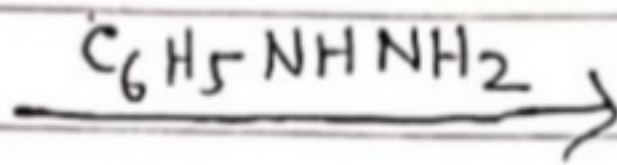
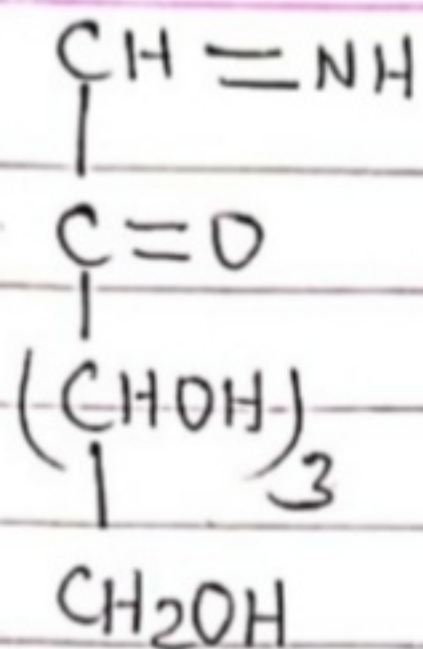
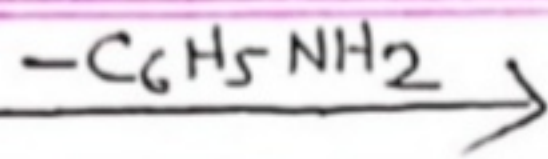
This ketone group then condenses with phenyl hydrazine to form osazone.



Mechanism Continue..

Mechanism Continued..

3.



D-Glucosazone

~Completed~