

Chemistry 2018-19

B.Sc. III<sup>rd</sup> year (II<sup>th</sup> sem)

Organic Chemistry - Prostect Non-Medical

AUGUST -

Mrs. Sonam Baghel

I NMR Spectroscopy - I :-

1. Principle of nuclear magnetic resonance, the PMR spectrum,
2. Number of signals, peak areas, equivalent & Non-equivalent protons, position of signals.
3. Chemical shift,
4. Shielding & deshielding of protons, proton counting,
5. Splitting of signals & coupling constants,
6. Magnetic equivalence of protons.

SEPTEMBER -

II NMR Spectroscopy - II :-

Discussion of PMR spectra of the molecules:

1. Ethyl bromide, n-propyl bromide, isopropyl bromide
  2. 1,1-dibromoethane, 1,2-dibromoethane, ethanol,
  3. Acetaldehyde, ethyl acetate, toluene, benzaldehyde, & acetophenone
- Simple problems on PMR spectroscopy for structure determination.

October -

III Carbohydrates - I :-

1. Classification & nomenclature, Monosaccharides, Mechanism of osazone formation.
2. Interconversion of glucose & fructose,
3. Chain lengthening & chain shortening of aldoses.
4. Configuration of monosaccharides, formation of glycosides, ethers & esters
5. Determination of ring size of glucose & fructose, Diastereomers
6. Open & cyclic structure of D(+)-glucose & D(-)-fructose.

November -

IV (A) Carbohydrates - II :-

An introduction to disaccharides (Maltose, sucrose & lactose) & polysaccharides (starch & cellulose)

(B) Organometallic Compounds :-

Organomagnesium, Organolithium & organozinc compounds :-  
formation, structure & chemical reactions of them.