Dated: 01.05.2020

Online assignment-1

M.Sc. IV SEM Chemistry

Chemistry of natural products (M4CHE04-ET04B)

Sr. No.	**Roll No.**	**Topic**
1.	11, 24	Establish the structure of *coniine* and discuss its synthesis.
2.	12, 25	Establish the structure of ephedrine and write its synthesis. Discuss the stereochemistry of ephedrine.
3.	13, 26	Establish the structure of (±)-*nicotine* and write down its synthesis.
4.	14, 27	Draw the structure of atropine and calculate the DBEs. Establish the structure of (±)-*tropic acid* and discuss the synthesis.
5.	15, 28	Determine the structure of *tropine* using conventional methods and also discuss the methods of its preparation. Discuss the stereochemistry of *tropine*.
6.	16, 29	Discuss the synthesis and stereochemistry of *quinine*.
7.	17, 30, 10	Draw the structure of *quinine* and calculate DBEs. What happens when, A. *Quinine* is fused with KOH. B. *Quinine* is oxidized with chromic acid. Characterize the *quininic acid* and discuss its synthesis.
8.	18, 1, 9	Draw the structure of *meroquinine* and calculate the DBEs. Establish the structure of *meroquinine* using conventional methods. What is the nature of

		linkage between *quininic acid* and *meroquinine* in *quinine* ?
9.	19, 2	Discuss the synthesis of *morphine*.
10.	20, 3	Establish the structure of *morphine*.
11.	21, 4, 8	Discuss the following degradation methods of alkaloids with the help of suitable examples, A. Hofmann elimination B. Emde's degradation C. Von Braun's degradation D. Reductive degradation
12.	22, 5	Discuss the following methods of the structure determination of the alkaloids with the help of suitable examples, A. Alkali Fusion B. Oxidation C. Zn dust distillation D. Nature of nitrogen atom E. Double Bond Equivalents (DBEs)
13.	23, 6, 7	Write a detailed note on structure, classification and synthesis of prostaglandins.

Name of faculty

Dr. Tarun Kumar