

**M-33/2110**

**10474/N**

**Paper-Chemistry of Natural Products-322**

**(Semester-III)**

**(SYLL-DEC-2019)**

**Attempt any four questions**

**M. M. 55**

1. Describe the structural elucidation of Atisine. (13.75)
2. How will you determine the presence of ring size in Cholesterol? Also, describe the structural determination of basic framework of Cholesterol. (13.75)
3. (a) Give the biosynthesis of Flavonoids. (6.75)  
(b) Draw the Mevalonic acid pathways and Acetogenesis. (7)
4. Describe the synthesis of Quinine. (13.75)
5. How will you determine the presence of carbonyl group, olefin bond, ring size using oxidation method and spectroscopic techniques (take proper examples of natural compounds). (13.75)
6. Write a short note on following system and draw the structures (a) Erythromycin (b) Civetone (c) Muscopyridine (d) Methmycin. (3.43\*4=13.75)
7. How will you show that (a) Santonin contain lactone type of moiety and naphthalene type of framework (4)  
(b) Presence of side chain in Cholic acid (4)  
(c) Synthesis of Testosterone. (5.75)
8. Describe the synthesis of following  
(a) Ascorbic acid (7)  
(b)  $\alpha$ -pinene. (6.75)
9. (a) Discuss the degradation of Morphine to Apomorphine (4)  
(b) Discuss the degradation of (a) Terramycin to Terracinoic acid (5)  
(c) How will you determine the presence of nitrogen using Hoffmann degradation and Von Braun methods?(take proper examples of natural compounds) (4.75)