

DD-759

M. Sc. (Fourth Semester) EXAMINATION, 2020

CHEMISTRY

Paper No. CH-20

(Natural Product and Medicinal Chemistry)

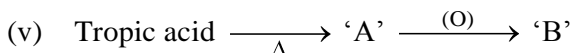
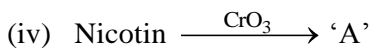
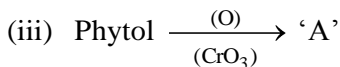
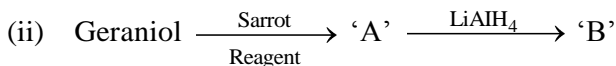
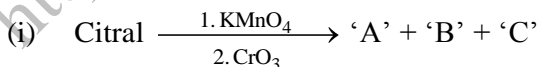
Time : Three Hours

Maximum Marks : 80

Note : Attempt all the *four* questions. *One* question from each Unit is compulsory. All questions carry equal marks.

Unit-I

1. (a) Complete the following reactions and name the products (write structure also) : 2 each



- (b) Explain the following with suitable example : 5 each
- (i) Oxidative degradation of terpenes
 - (ii) Emde's degradation

Or

- (a) Prove that zinzibarene has two conjugated double bonds. 5
- (b) Discuss the structure, establishment, synthesis and stereochemistry of Ephedrine. 15

Unit—II

2. (a) What are anthocyanins ? Write their isolation and function. 5
- (b) Write Chalcone synthesis of Myracetin. 5
- (c) Discuss the position of the following groups in cholesterol : 5 each
- (i) – OH group
 - (ii) Angular – CH₃ group

Or

- (a) Write the structure and synthesis of Apegenin. 5
- (b) Determine the structure of oestrone and confirm it by synthesis. 15

Unit—III

3. Write notes on the following : 5 each
- (i) Lead and Lead modification
 - (ii) Elimination
 - (iii) Prodrugs and Soft drugs
 - (iv) Theories of drug activity

Or

Discuss Drug metabolism, its factors and significance in design of drugs. 20

Unit—IV

4. (a) Classify antineoplastic agents with example. 5
(b) Write a note on recent developments of cancer chemotherapy. 10
(c) Establish the structure of tetracycline. 5

Or

- (a) Write the synthesis, properties and uses of pyramethamine. 5
(b) Give an account of degradative structure elucidation of penicillin V and confirm by a synthesis. 15