

DEPARTMENT OF SCIENCES, IV SEMESTER M.Sc (Chemistry)

End Semester - 2020

**SUBJECT: Open Elective
DYES AND PESTICIDES [CHM 5003]
(REVISED CREDIT SYSTEM-2017)**

Time: 2h

Date: 17-07-2020

MARKS: 25

Note: Answer all questions. Write reactions or structures wherever necessary.

- 1 A. Describe the Witt's theory of colour in detail.
B. Give the preparations of following dye;
i. Malachite green ii. Congo red
[3+2]
- 2 A. Discuss the classification of dyes on the basis of their applications.
B. What are the requirements of a substance to act as a dye?
[3+2]
- 3A. Write the basic structure of Indigoid dye. Give the synthesis of Indigotin by starting from
i) Aniline
ii) Anthranilic acid
B. Explain the valence band theory of colour.
[3+2]
- 4A. What are the characteristics of organochlorenes pesticides? How do you synthesis the dichloro- diphenyl-trichloroethane?
B. Distinguish between the following:
i) Pyrethrins and pyrethroids
ii) Natural and synthetic insecticides
[3+2]
- 5A. Explain the different types of synthetic insecticides in detail. Write any two advantages and disadvantages.
B. What are the effects of Bhopal gas tragedy?
[3+2]
