



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

**END SEMESTER EXAMINATIONS, APRIL 2023**

**SUBJECT: Chemistry of Dyes and Pesticides [CHM 6003]**

**(CHOICE BASED CREDIT SYSTEM - 2021)**

**Time: 3 Hours**

**Date: 28 Apr 2023**

**MAX. MARKS: 50**

Note (i) Answer ALL questions

(ii) Draw diagrams, and write equations wherever necessary

		Marks	CO	BL
1A	i) Discuss the Witt's theory of colour ii) Give reason- All the colour compounds are not a dyes	4	1	2
1B	Give the preparations of following dyes: i) Para roseaniline ii) Auromine O	4	2	3
1C	What are the differences between vat and disperse dyes?	2	2	2
2A	Explain the classification of dyes according to their structure.	4	1	2
2B	What are the characteristic features of fluorescent brighteners? Write the synthetic route of Chome violet and its uses.	4	3	2
2C	Explain the application of phthalocyanines.	2	3	2
3A	What are anthraquinonoid dyes? Explain the preparation of Alizarin dye and its applications.	4	3	2
3B	Give the synthetic route for Indigo dye, starting from the following: i) 2- Nitrobenzaldehyde ii) Aniline	4	2	3
3C	Describe the relationship between colour and constitution of dyes.	2	1	2
4A	Explain the different entry routes of pesticide toxicity with an example for each.	4	4	3
4B	Discuss the procedure for the extraction of pyrethrum? How do you synthesize Chlorodane?	4	4	2
4C	Explain the Norcotic poison symptoms.	2	3	2
5A	Discuss the effects of endosulfan on humans and environment.	4	5	2
5B	Write the structure and explain the befenthrin and phenothrin synthetic insecticides. Write any two advantages and disadvantages.	4	5	2
5C	Distinguish the following: i) Acute and chronic toxicity ii) Synthetic and natural insecticides	2	5	2