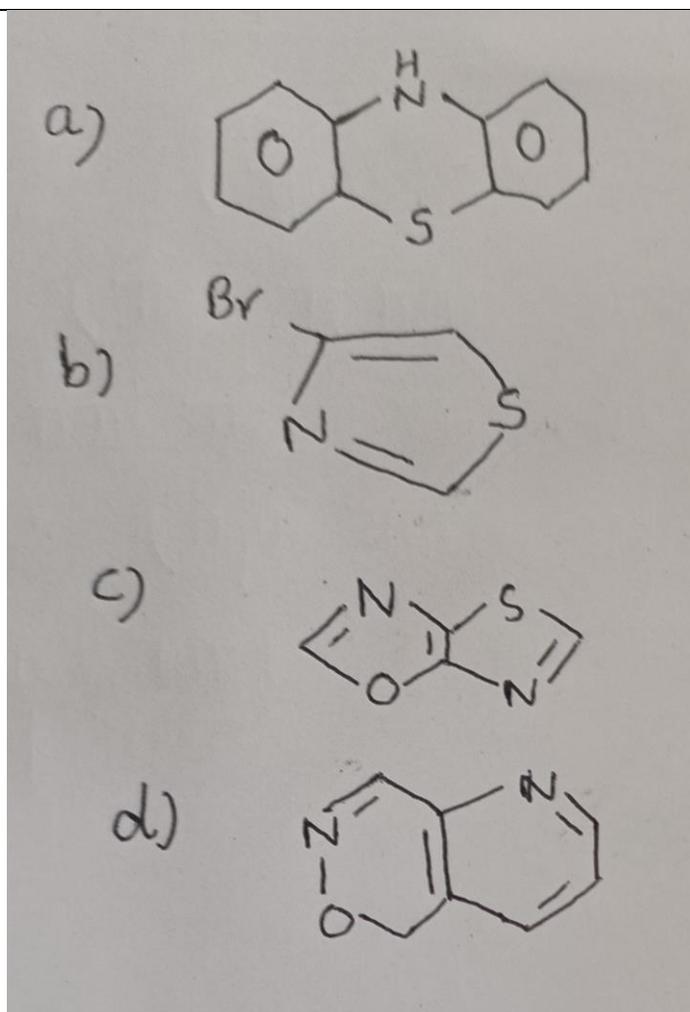


Name:			
Enrolment No:			
UPES End Semester Examination, December 2023			
Program Name: M.Sc Chemistry		Semester : III	
Course Name: Heterocyclic Chemistry		Time : 3 hrs	
Course Code: CHEM 8027P		Max. Marks:100	
Nos. of page(s): 2			
Instructions: Read all the below mentioned instructions carefully and follow them strictly:			
1) Mention Roll No. at the top of the question paper.			
2) Attempt all the parts of a question at one place only.			
SECTION A (5Qx4M=20Marks)			
S. No.		Marks	CO
Q 1	Explain the major and minor ring priority in fused heterocycles when both fused rings have same number and same kind of hetero atoms.	4	CO1
Q 2	Explain the position of electrophilic substitution reaction in isothiazole with suitable examples.	4	CO1
Q 3	Define the structure and chemistry of porphyrins.	4	CO2
Q 4.	Describe the various chemical reactions of oxepines.	4	CO1
Q 5.	Explain the various ring opening reactions is four membered rings.	4	CO2
SECTION B (4Qx10M= 40 Marks)			
Q 6.	Describe the different chemical properties of pyrazole and mention its pharmaceutical application.	10	CO3
Q 7.	Explain two methods of preparation and chemical properties for benzofuran.	10	CO2
Q 8.	How benzo fused six membered ring quinoline is prepared? Discuss its two chemical properties with suitable chemical reactions.	10	CO2
Q 9.	Give the nomenclature of the following compounds.	10	CO1



SECTION-C
(2Qx20M=40 Marks)

Q 10.	Discuss the chemistry of thiazole in detail.	20	CO2
Q 11.	<p>Explain the various chemical reactions of isoquinoline and two methods of preparation.</p> <p style="text-align: center;">OR</p> <p>Explain the various chemical reactions of oxazole with their two preparation methods.</p>	20	CO2