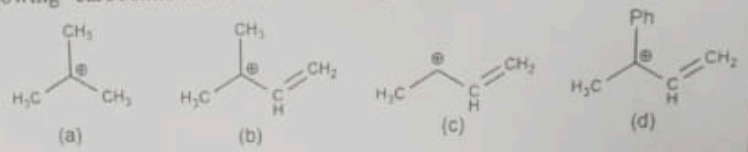
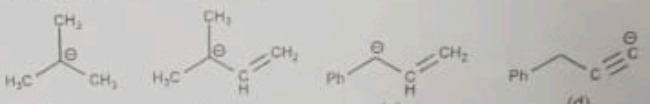
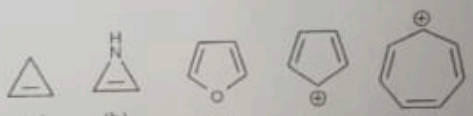
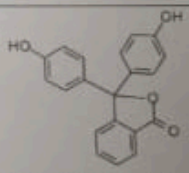
VIT
Vellore Institute of Technology

Name of Examination	**Continuous Assessment Test -2(CAT-II), Win 2022-23 Semester, (May 2023)**			
Slot: **D2+TD2**	Course Mode: CBL		Class Number(s): **CH2022232300250**	
Course Code:	BCHY101L	Course Title:	Engineering Chemistry	School: SAS
Emp. No.:	52805	Faculty Name:	**Dr. Lakkoji Satish**	
Contact No.:	8895446990	Email:	lakkoji.satish@vit.ac.in	

General Instructions: OPEN BOOK Examination

Q. No.	Sub-division	Questions	Marks
		Answer **All Five** Question — Total Marks: 5 X 10 Marks = 50	
1.	i)	Arrange the following carbocations in the increasing order of stability with proper justification.  (a) (b) (c) (d)	5
	ii)	Arrange the following carbanions in the increasing order of their stability and explain corresponding factors.  (a) (b) (c) (d)	5
2		Explain the type of aromatic nature and stability order of the following compounds with proper justification.  (a) (b) (c) (d) (e)	10
3	i)	Explain the colour properties of the following compound in the solutions having pH =3 and pH =13. Also, mention any one application based on the corresponding colour difference. 	5
	ii)	With appropriate reactions, illustrate a method involving electrodes and external electric energy that is used to deposit Nickel on a small Iron block.	5
4.	i)	Describe the influence of temperature and a trivalent atom on the conductivity of Germanium.	5
	ii)	Explain the electrolytic activity of an energy device having high charge density with appropriate reactions and mention any of its significant drawbacks.	5
5.	i)	"Crystal structure or atomic arrangement in a material plays crucial role in its electrical properties". Justify this statement with appropriate examples.	5
	ii)	Illustrate the construction and function of a cleanest energy device wherein chemical energy of hydrogen is directly converted into electrical energy with negligible pollution.	5

All the very best