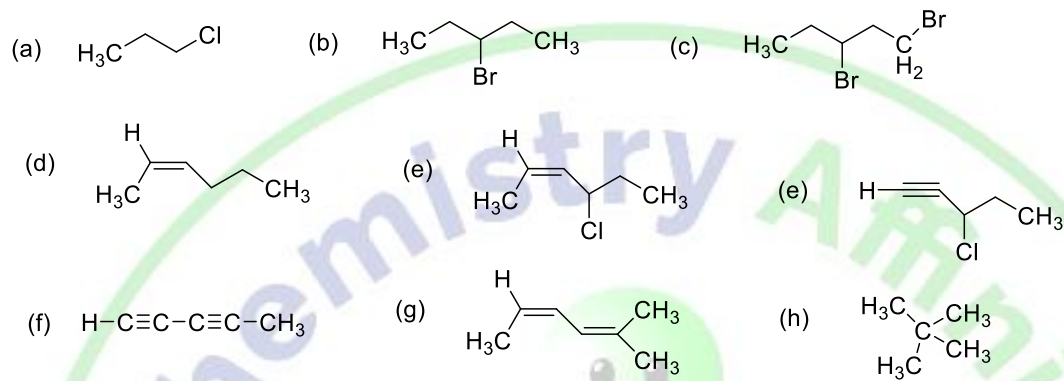
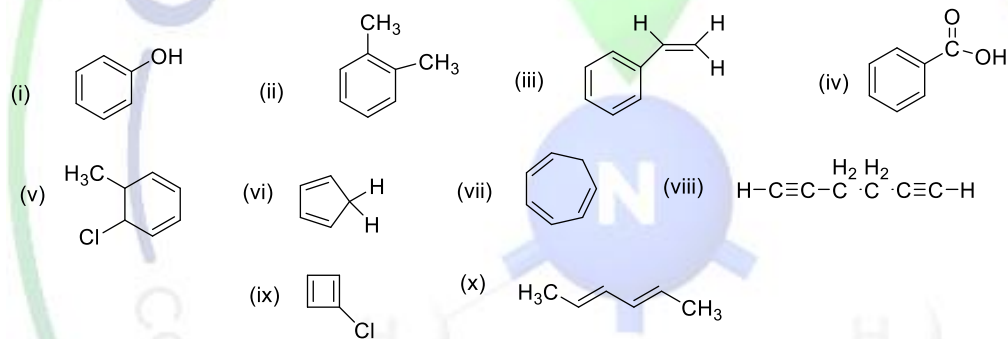


Fundamental Concepts on Organic Chemistry

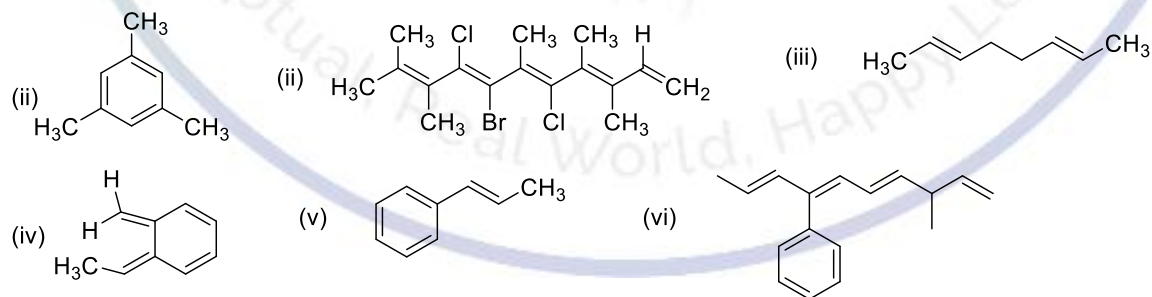
1. Write down IUPAC nomenclatures



2. Find out number of sigma and pi bonds from the following molecules



3. Find out conjugation (alternate single and double bonds) from the below molecules. Circle the conjugation part of the molecule.



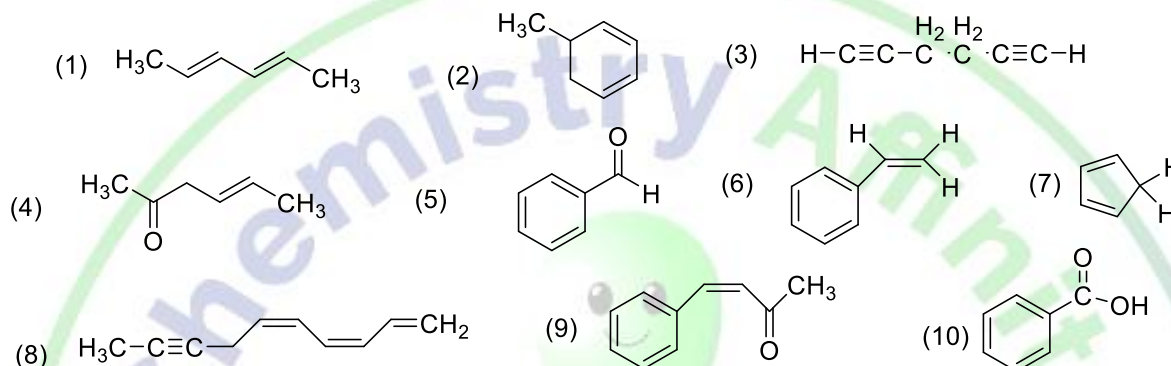
4. Give two examples of aromatic hydrocarbons and cyclic hydrocarbons.

5. What are the main structural differences between cyclohexadiene and benzene.

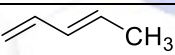
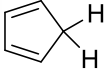
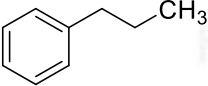
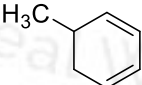
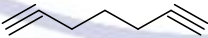
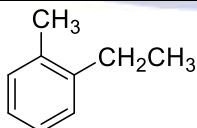
6. Draw the structures of toluene, m-xylene, mesitylene and 1,2-dimethyl-1,2-cyclohexadiene

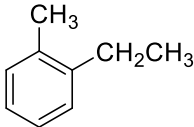
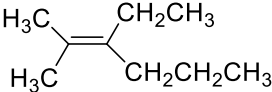
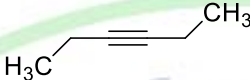
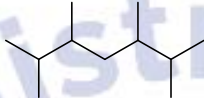
7. Draw any two molecules which shows terminal and internal alkyne. Mention their IUPAC nomenclature too.

8. Mention hybridization of each carbon in following organic molecules

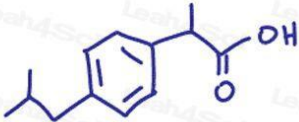
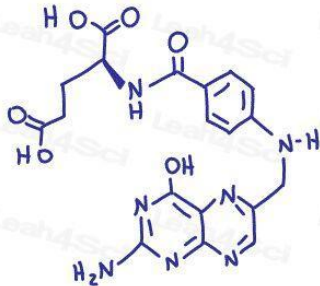
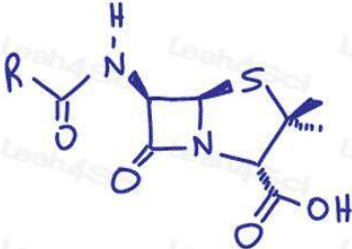
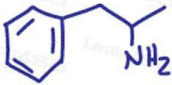


9. Mention types of hydrocarbons (eg: cyclic /acyclic/ alkene/alkyne/alkane /aromatic/saturated/unsaturated)

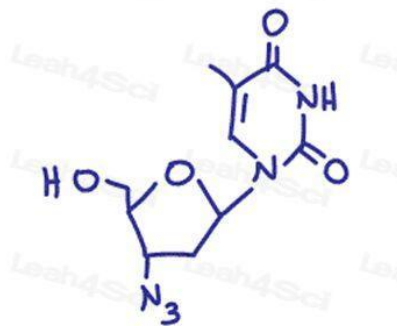
Entry	Organic molecule	Types of hydrocarbons
1	Example: 	Cyclopentane: cyclic hydrocarbon: Saturated
2	$\text{H}_3\text{C}-\text{CH}=\text{CH}_2$	
3		
4		
5		
6		
7		
8	$\text{H}_3\text{C}-\text{C}\equiv\text{C}-\text{CH}_3$	
9		
10		

11		
13		
14		
15		

10. Identify the functional group/s present in the following molecules.

(a) Ibuprofen – anti inflammatory drug	
(b) Folic Acid – Vitamin B	
(c) Penicillin – common antibiotic	
(d) Amphetamine – a nervous system stimulant	

(e) AZT or azidothymidine – used to treat HIV



All the best