NUCLEUS EDUCATION
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IIT - ORGANIC CHEMISTRY

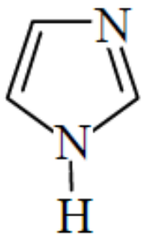
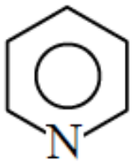
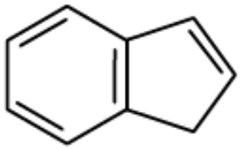
NURTURE

Corporate Office: NAIVEDHYAM, Plot No. SP-11, Old INOX, Indra Vihar,
Kota (Raj.) 324005

DPP # 10

Time : 30 Min.

1. Match the column-

Column-I (Compounds)		**Column-II (Properties)**	
(A)		(P)	Aromatic
(B)		(Q)	Conjugate base is aromatic
(C)		(R)	Most acidic hydrogen in column-I
(D)		(S)	Most basic compound in column-I
		(T)	Non-aromatic

2. **Statement 1 :** Correct order of acidic strength is $CH_3CH_3 > CH_2=CH_2 > HC\equiv CH$

Statement 2 : C–H bond energy in ethene is more than ethane but less than ethyne.

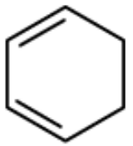
(A) Statement-1 is true, statement-2 is true and statement-2 is correct explanation for statement-1.

(B) Statement-1 is true, statement-2 is true and statement-2 is NOT the correct explanation for statement-1.

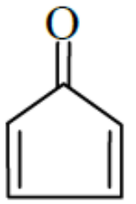
(C) Statement-1 is true, statement-2 is false.

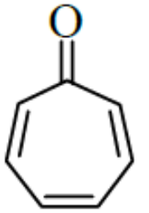
(D) Statement-1 is false, statement-2 is true.

3. Which of the following molecules, in pure from, is (are) **unstable** at room temperature ?

(A) 

(B) 

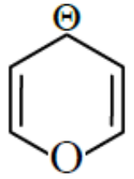
(C) 

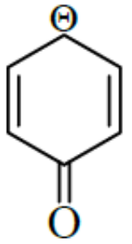
(D) 

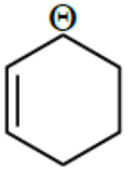
4. Which of the following group will increase the basicity of aniline when attached to its para position ?

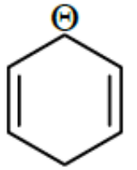
(A) –OH (B) $-OCH_3$ (C) $-CH_3$ (D) $-NO_2$

5. Identify most stable anion :

(A) 

(B) 

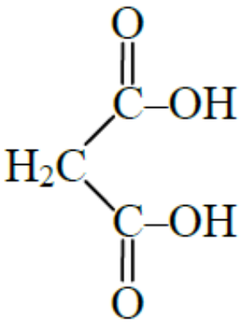
(C) 

(D) 

6. Select true statement(s) :

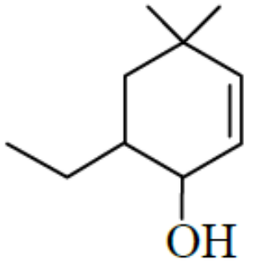
(A) Resonance affects bond length

(B) Inductive affect is a permanent effect.

(C) In  most acidic H is connected directly to oxygen not on carbon.

(D) In urea both C–N bond length are identical

7. IUPAC name of compound is :

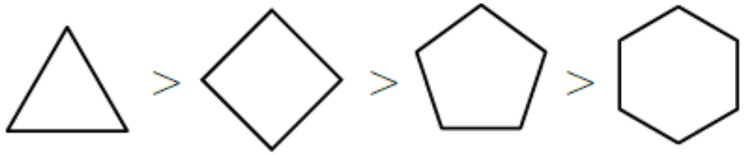


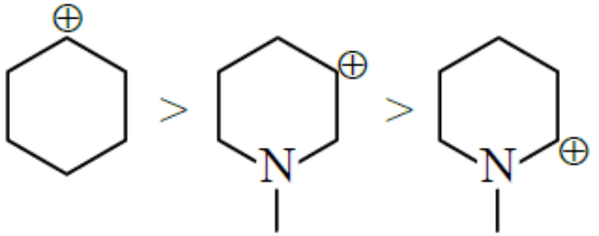
(A) 5-ethyl-3,3-dimethyl cyclohex-en-6-ol (B) 6-ethyl-4,4-dimethyl cyclohex-2enol

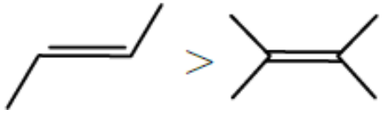
(C) 2-ethyl-4,4-dimethyl cyclohex-5-enol (D) 6-ethyl-4,4-dimethyl cyclohexenol

8. Which of the following are incorrect :

(A) Order of heat of hydrogenation $H_2C–CH=CH–CH_2–CH_2–CH=CH–CH_3$

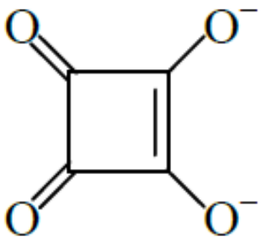
(B) Order of heat of combustion 

(C) Order of stability of carbocation 

(D) Order of heat of combustion is 

9. Which of the following options are correct :

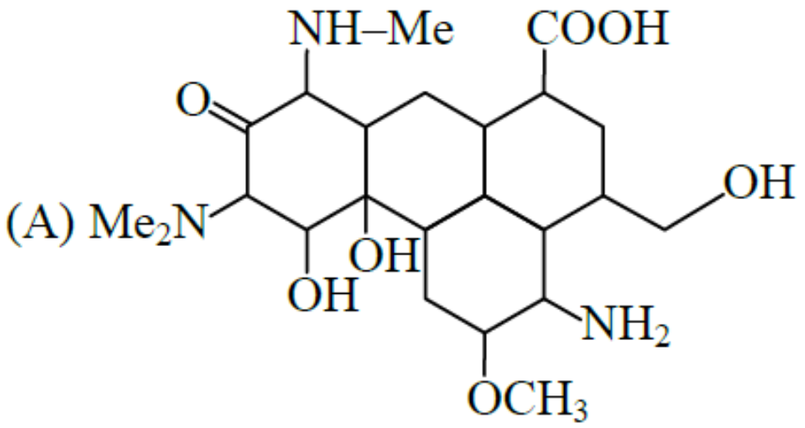
(A) p chloro phenol is more acidic than p fluoro phenol

(B) Squaric acid dianion  have identical R.S.

(C) Squaric acid dianion have all C–O bonds identical

(D) Squaric acid dianion have all C–C bonds identical

10. Number of different types of functional groups in the following compound is/are



(B) Double bond equivalent for the given compound is