NUCLEUS EDUCATION
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IIT - ORGANIC CHEMISTRY

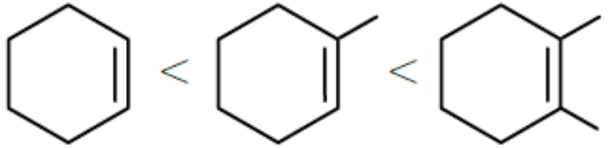
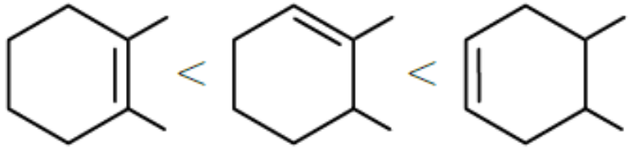
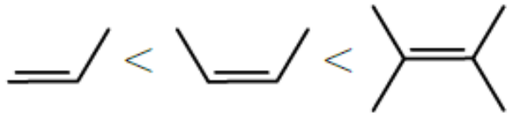
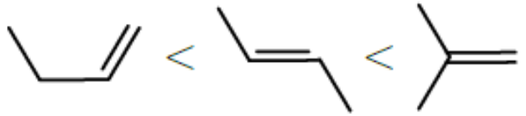
NURTURE

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

DPP # 11

Time : 30 Min.

1. Match the column-

Column - I		Column - II	
(A)		(P)	Correct order of stability of alkene
(B)		(Q)	Correct order of heat of combustion
(C)		(R)	Correct order of heat of hydrogenation
(D)		(S)	Correct order of C=C bond length
		(T)	Correct order of C=C bond energy

2. **Statement-1 :** Me $-\overset{\cdot\cdot}{C}H_2$ is more stable than MeO $-\overset{\cdot\cdot}{C}H_2$

Statement-2 : Me is a +I group where as MeO is a –I group.

(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 false, statement-2 is true.

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

3. Which of the following is/are correct IUPAC name -

(A) 1,4-dichloro cyclopentane

(B) 1,4-dichloro-4-ethyl pentane

(C) 5-bromo-2-chloro hexane

(D) 5-ethyl-2-methyl heptane

4. Correct order of basic strength :

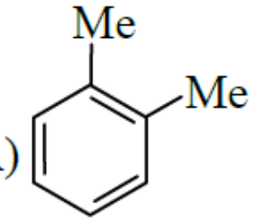
(A) $CH_3NH_2 > CH_3-\overset{\oplus}{N}H_3 > CH_3-\overset{\ominus}{N}H$

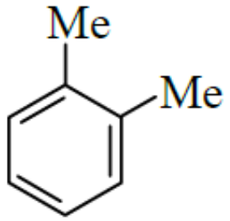
(B) $\overset{\ominus}{O}H > CH\ CO_2^{\ominus}\quad Cl$

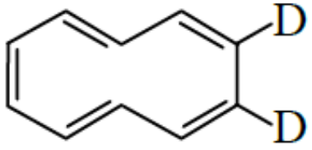
(C) $CH_3\overset{\ominus}{O} > CH_3\overset{\ominus}{N}H > CH_3-\overset{\ominus}{C}H_2$

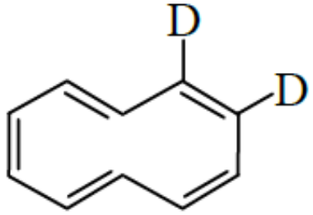
(D) $CH_3CH_2NH_2 > CH_2{=}CH{-}NH_2 > HC{\equiv}C{-}NH_2$

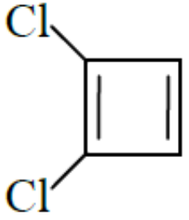
5. Which one of following represents different molecules ?

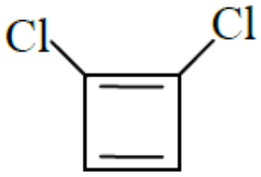
(A) 

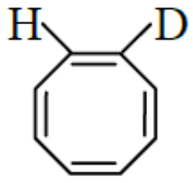
and 

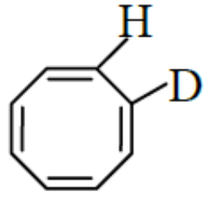
(B) 

and 

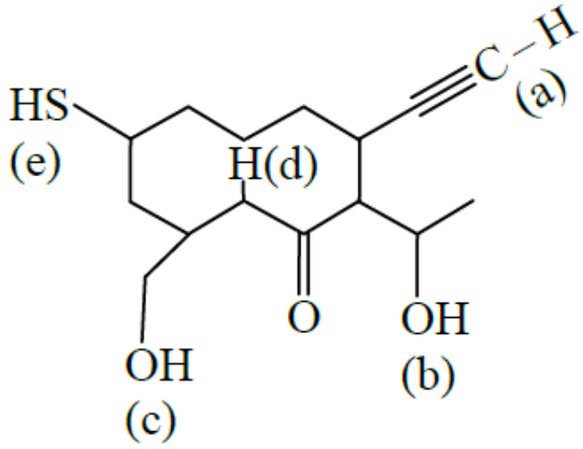
(C) 

and 

(D) 

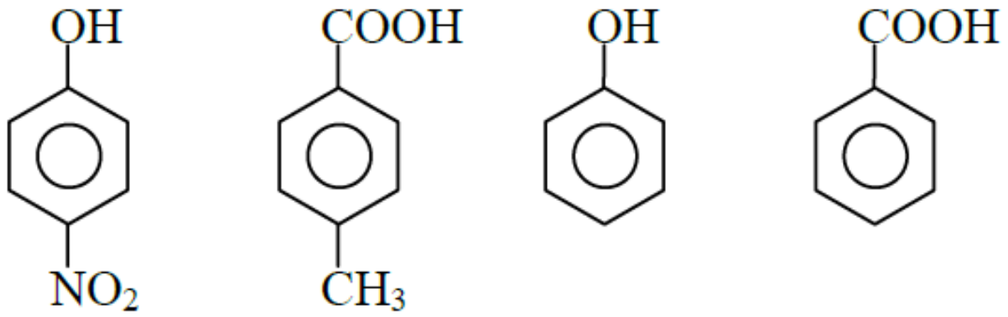
and 

6. Correct descending order of deprotonation in the following compound :



(A) e > d > c > b > a (B) e > d > c > a > b (C) e > c > b > d > a (D) e > c > b > a > d

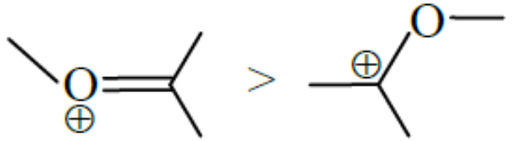
7. Acidic strength order of given compound

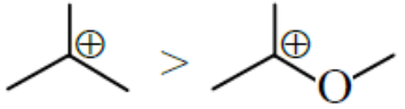


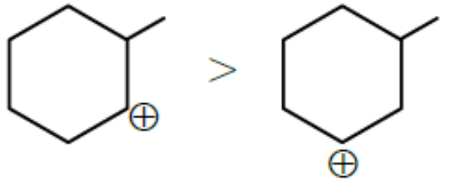
(I) (II) (III) (IV)

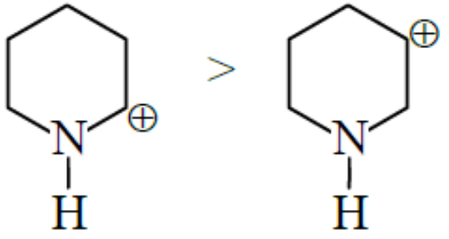
(A) I > IV > III > II (B) I > IV > II > III (C) IV > II > I > III (D) IV > I > II > III

8. Incorrect stability order is/are

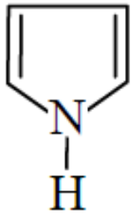
(A) 

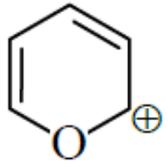
(B) 

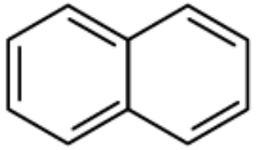
(C) 

(D) 

9. Which of the following is / are aromatic species.

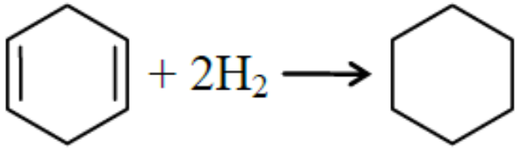
(A) 

(B) 

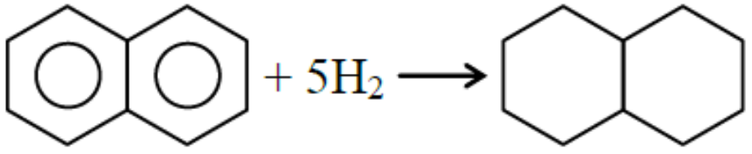
(C) 

(D) 

10. Analyse the following hydrogenation reactions and calculate resonance energy of 'X' in kcal/mole:



$\Delta H = -58$ kcal/mole



'X'

$\Delta H = -94$ kcal/mole