DPP-03

SOLUTION

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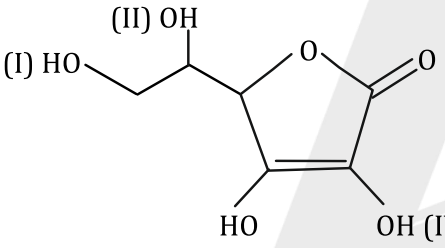
1. Acidic strength order = (D) > (B) > (A) > (C)

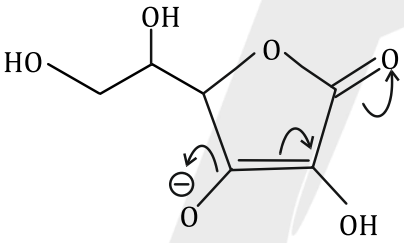
(15.5) (9.95) (4.76) (–3)

Correct Ans.

(A) → (iii)
(B) → (ii)
(C) → (i)
(D) → (iv)

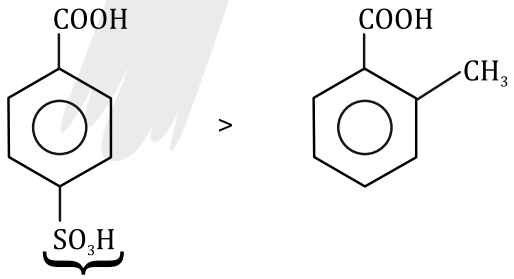
2.





Extended conjugation most stable conjugate Base

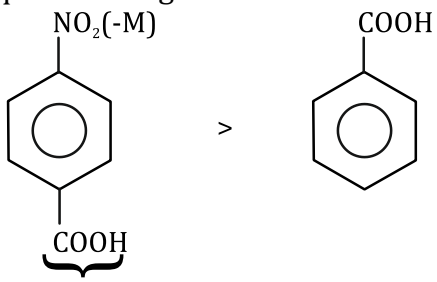
3. (A)



most Acidic

3 eq Resonasing structures

(B)



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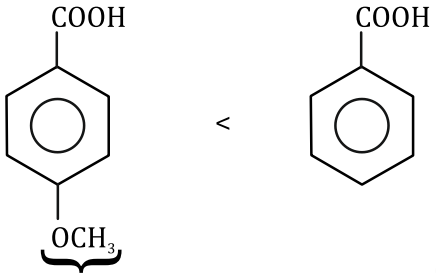
Most Acidic

Due to – M of (NO_2) group

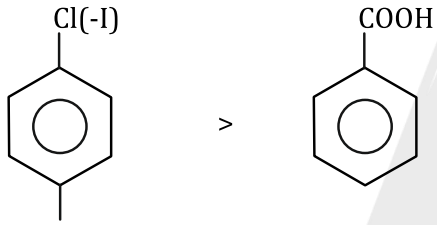


(C) correct order

Due (+M)

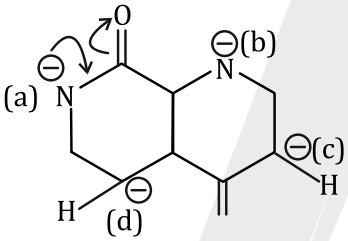
Of ($O-CH_3$)

Less Acidic



(D)

Most acidic



4.

(a) Resonance stablised by (C = O)

(b) Stable by Inductive effect (+I)

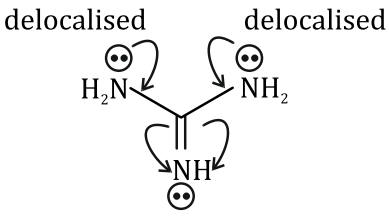
(c) Resonance stabilized by (C = O)

But –ve chage on less EN atom (C).

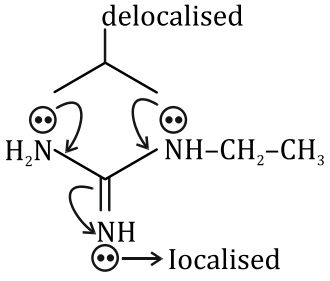
(d) Stable by (–I) effect.

Correct order = a > b > c> d

Ans (c)



5. (A)



(B)

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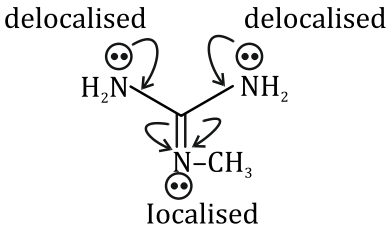
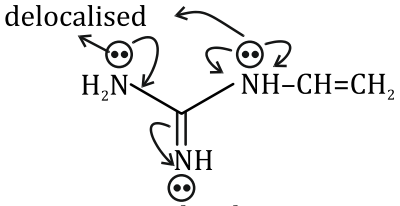
(C)

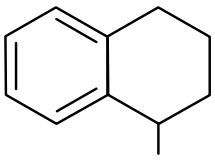


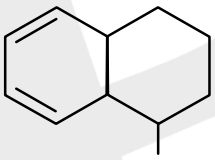
Conjugate Base is more stable by +I of (CH_3) Group

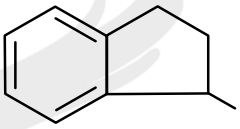
(D)



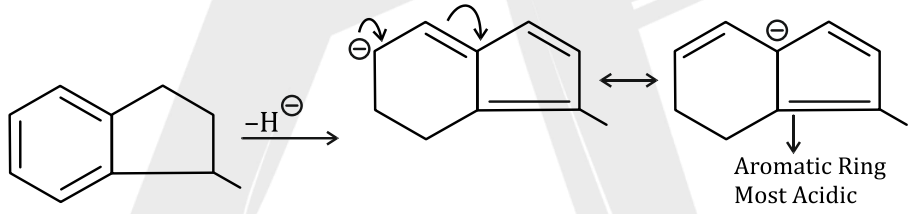
6. Acidic strength

(A) 

(B) 

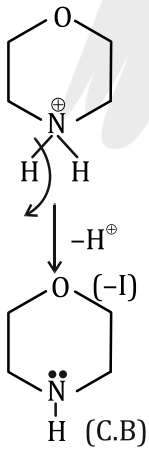
(C) 

(D)

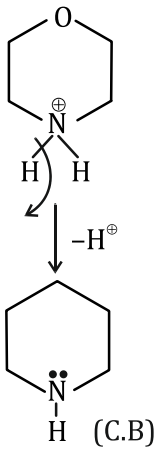


7. Acidic Strength order

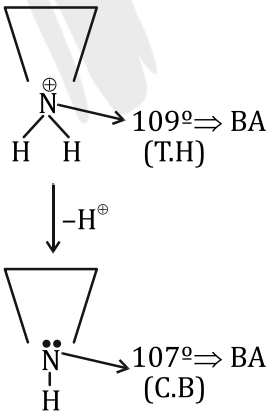
(I)



(II)



(III)



Angle Strain ↑
due to increase in Angle strain so it easily remove $H^{\oplus}$ to gain less bond angle (107º)

Acidic Strength ⇒ III > I > II

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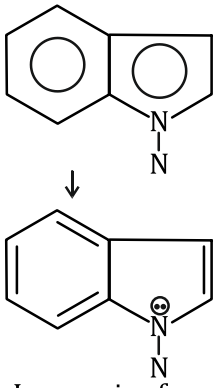
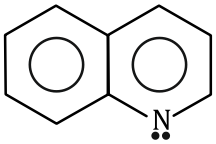
Ans. (A)

(P)

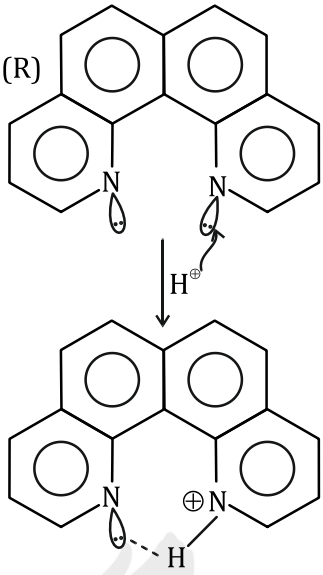


Lone pair of
(N) is cojugated

(Q)



(R)



⇒ due to hydrogen bonding
in its conjugate Base
⇒ most Basic

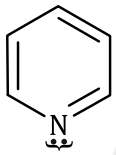
8.

R > Q > P

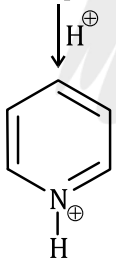
Ans. (B)

9. Ineveasign order fo their Basic strength

(I)

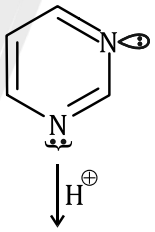


localised
lone pair



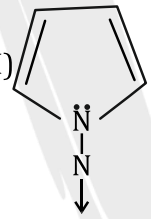
⇒ conjugate Acid

(II)



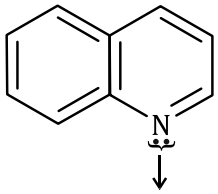
conjugate Acid
⇒ (–I) effect of
(N) atom

(III)



⇒ delocalised
lone pair
⇒ less Available
for $H^{\oplus}$ Attack

(IV)



localised lone pair
But (–I) of more No.
of π Bonds carbon atoms.

⇒ less –I of of double bonded carbon atoms due to in less No.

Correct order ⇒ I > IV > II > III

Ans. (D)

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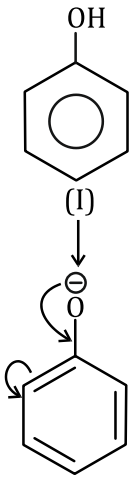
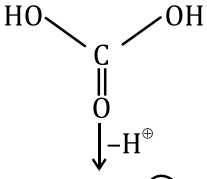
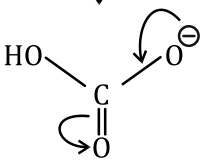
10. Acidic Strength order



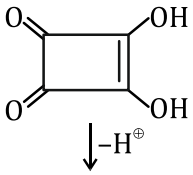
(I)

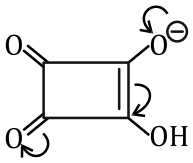
–ve charge on carbon unequal R.S



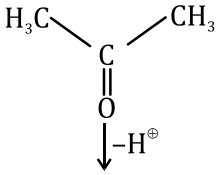


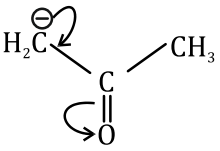
⇒ 2eq R.S.
⇒ more stable than (I)





⇒ more delocalised OH –ve charge
⇒ most Acidic





⇒ –ve charge on less EN on (C)atom
⇒ less Acidic

⇒ III > II > I > IV

Ans. (B)