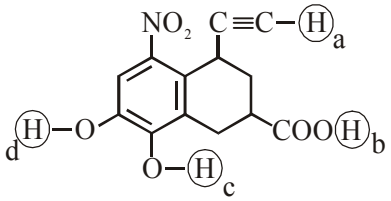
ACIDITY & BASICITY

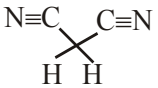
1. निम्नलिखित लेबलित हाइड्रोजनों को अम्लीयता के घटते क्रम में क्रमबद्ध कीजिये –

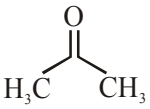
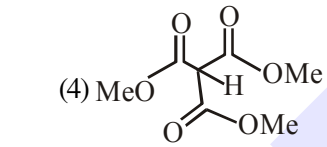


(1) b > c > d > a (2) c > b > a > d

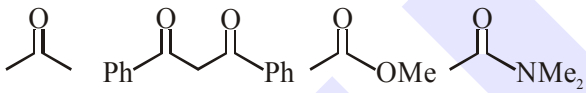
(3) b > a > c > d (4) c > b > d > a

2. निम्न यौगिकों में से किस में सर्वाधिक अम्लीय हाइड्रोजन है?

(1)  (2) $H_3C–C≡C–H$

(3)  (4) 

3. निम्न यौगिकों के α-हाइड्रोजन के अम्लीयता का बढ़ता क्रम है :



(A) (B) (C) (D)

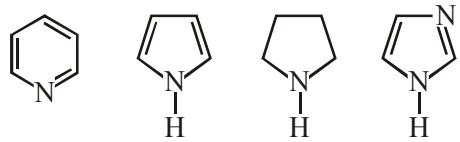
(1) (C) < (A) < (B) < (D)

(2) (B) < (C) < (A) < (D)

(3) (A) < (C) < (D) < (B)

(4) (D) < (C) < (A) < (B)

4. निम्न यौगिकों की क्षारीयता का बढ़ता क्रम है :



(A) (B) (C) (D)

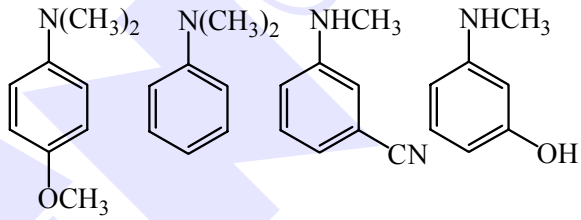
(1) (A) < (B) < (C) < (D)

(2) (B) < (A) < (C) < (D)

(3) (D) < (A) < (B) < (C)

(4) (B) < (A) < (D) < (C)

5. निम्न यौगिक के pK_b के मान का बढ़ता क्रम है :



I II III IV

(1) I < II < IV < III (2) II < IV < III < I

(3) II < I < III < IV (4) I < II < III < IV

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SOLUTION

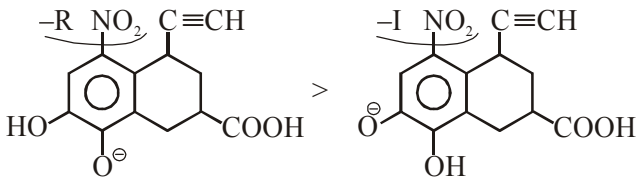
1. Official Ans. by NTA (1)

Sol. Acidic strength order :

$$R-\overset{O}{\overset{\|}{C}}-OH > R-OH > R-C\equiv CH$$

Reason : $R-\overset{O}{\overset{\|}{C}}-O^{\ominus}$ stable by equivalent resonance.

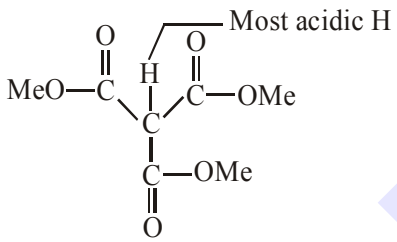
Stable :



So answer is b > c > d > a.

2. Official Ans. by NTA (4)

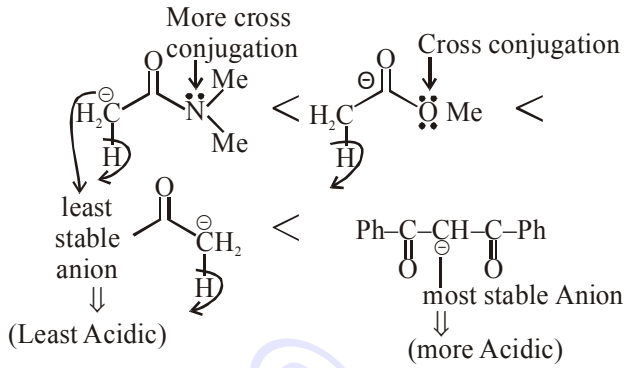
Sol.



Due to presence of 3 (–R) groups

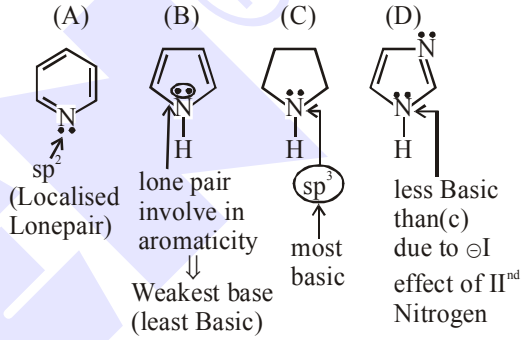
3. Official Ans. by NTA (4)

Sol. $\boxed{D < C < A < B}$



4. Official Ans. by NTA (4)

Sol.



5. Official Ans. by NTA (1)