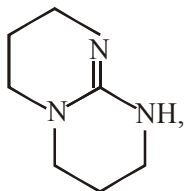


ELECTRONIC DISPLACEMENT EFFECT

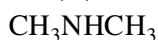
1. निम्न यौगिकों के लिए pK_b का बढ़ता क्रम होगा:



(A)



(B)

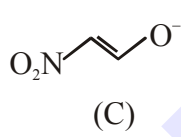
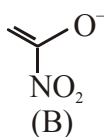
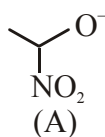


(C)

(1) (A) < (B) < (C) (2) (C) < (A) < (B)

(3) (B) < (A) < (C) (4) (B) < (C) < (A)

2. निम्नलिखित ऐल्कोक्साइडों के लिए स्थायित्व का सही क्रम है :-



(1) (C) > (B) > (A) (2) (C) > (A) > (B)

(3) (B) > (C) > (A) (4) (B) > (A) > (C)

3. निम्न यौगिकों को C-OH आबन्ध लम्बाई के बढ़ते क्रम में व्यवस्थित कीजिए :

मेथेनॉल, फीनॉल, p-एथाक्सीफीनॉल

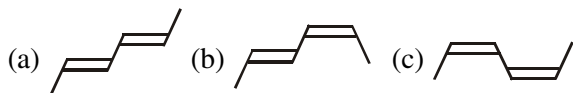
(1) फीनॉल < मेथेनॉल < p-एथाक्सीफीनॉल

(2) फीनॉल < p-एथाक्सीफीनॉल < मेथेनॉल

(3) मेथेनॉल < p-एथाक्सीफीनॉल < फीनॉल

(4) मेथेनॉल < फीनॉल < p-एथाक्सीफीनॉल

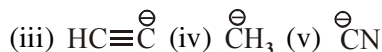
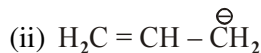
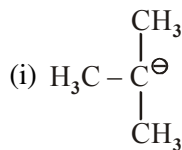
4. निम्न ऐल्काडाइन्स के लिए दहन ऊष्मा का सही क्रम है :



(1) (a) < (b) < (c) (2) (b) < (c) < (a)

(3) (c) < (b) < (a) (4) (a) < (c) < (b)

5. निम्न मध्यवर्तियों के लिए क्षारीयता का बढ़ता क्रम है (दुर्बल से प्रबल)



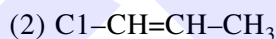
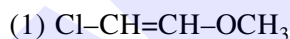
(1) (v) < (i) < (iv) < (ii) < (iii)

(2) (iii) < (i) < (ii) < (iv) < (v)

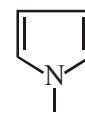
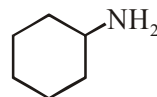
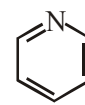
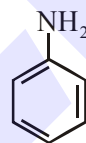
(3) (v) < (iii) < (ii) < (iv) < (i)

(4) (iii) < (iv) < (ii) < (i) < (v)

6. निम्नलिखित में से किसमें सबसे छोटा C-Cl आबंध है ?



7. निम्नलिखित ऐमीनों की क्षारकता का घटता क्रम है :



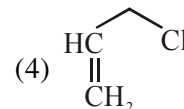
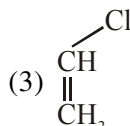
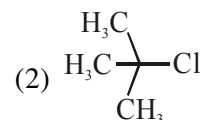
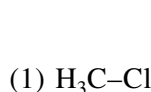
(1) (I) > (III) > (IV) > (II)

(2) (III) > (I) > (II) > (IV)

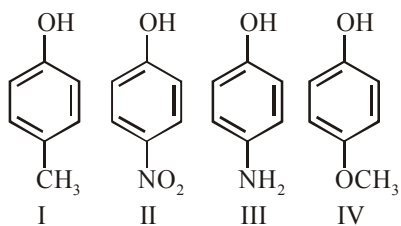
(3) (III) > (II) > (I) > (IV)

(4) (II) > (III) > (IV) > (I)

8. निम्नलिखित यौगिकों में से किसमें C-Cl आबंध सबसे छोटा है ?



9. निम्नलिखित यौगिकों के क्वथनांकों का बढ़ता क्रम है :

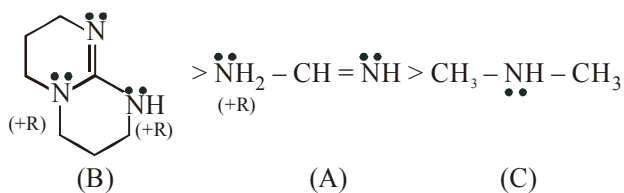


- (1) I < IV < III < II (2) IV < I < II < III
 (3) I < III < IV < II (4) III < I < II < IV

SOLUTION

1. NTA Ans. (3)

Sol. Base strength order

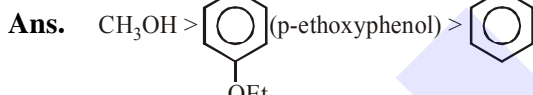
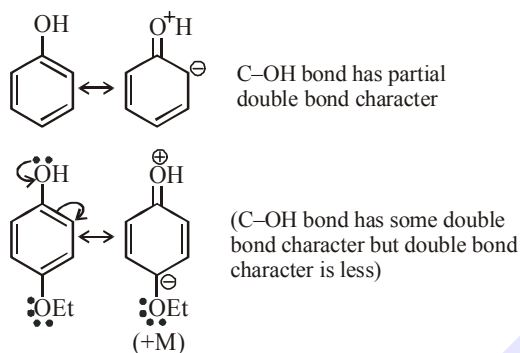


2. NTA Ans. (1)

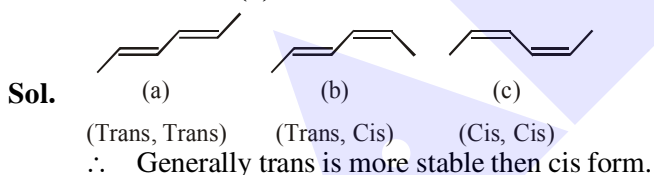
Sol. (C) > (B) > (A)

3. NTA Ans. (2)

Sol. H₃C - OH (100% single bond)



4. NTA Ans. (1)

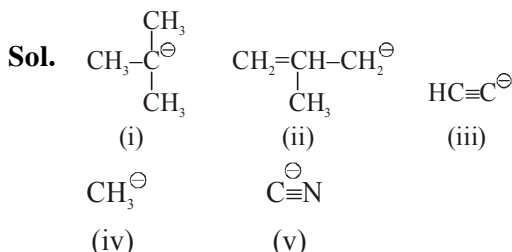


Heat of combustion (HOC) $\propto \frac{1}{\text{Stability}}$

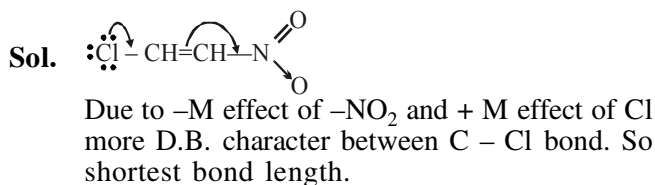
Stability : a > b > c

HOC : c > b > a

5. NTA Ans. (3)

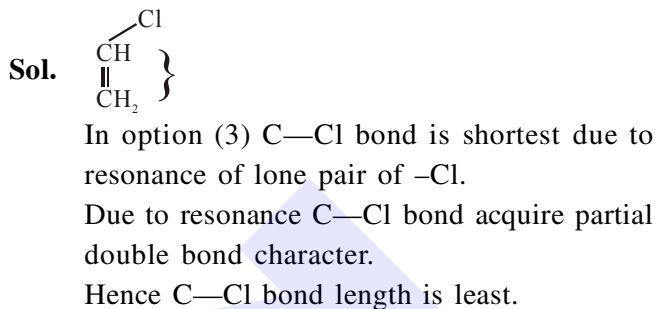


6. NTA Ans. (4)

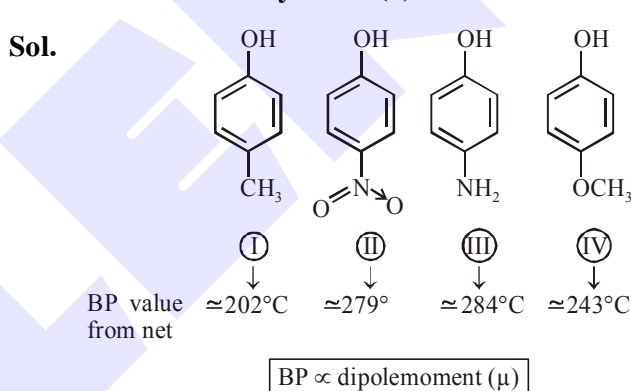


7. NTA Ans. (3)

8. Official Ans. by NTA (3)

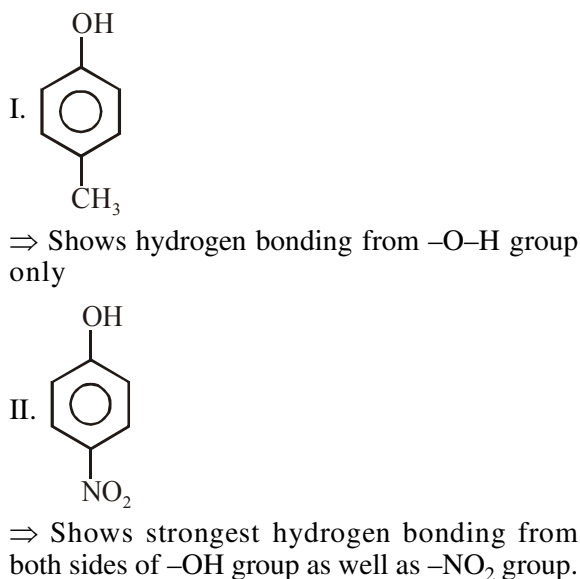


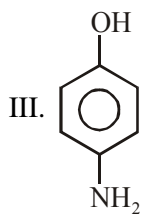
9. Official Ans. by NTA (1)



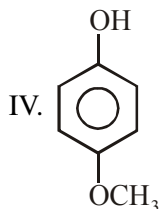
Alter

Increasing order of boiling point is :





⇒ Shows stronger hydrogen from both side of -OH group as well as -NH₂ group.



⇒ Shows stronger hydrogen bonding from one side -OH-group and another side of -OCH₃ group shows only dipole-dipole interaction.

⇒ Hence correct order of boiling point is:

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