

Master Math for JEE Main & JEE Advanced

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For JEE Main 2020 April



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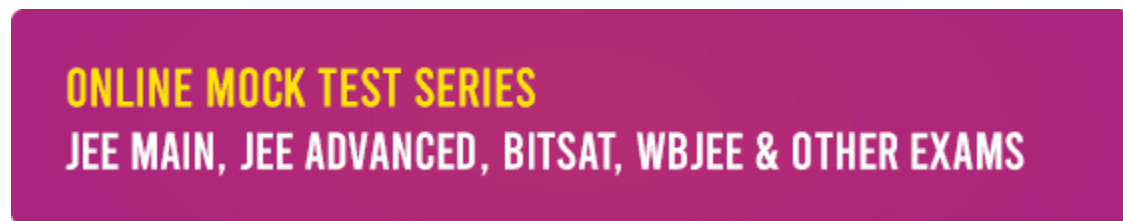
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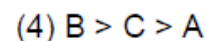
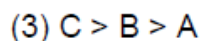
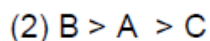
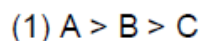
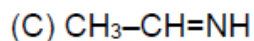
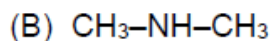
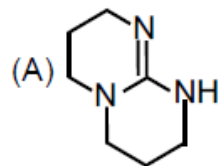
JEE Mains 2020 Jan Chapter wise Question Bank

General Organic Chemistry

Q1

Arrange the following in order of their pK_b value

निम्न को इनके pK_b मान के क्रम व्यवस्थित कीजिए –

7th Jan Morning

Sol

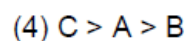
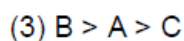
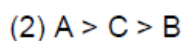
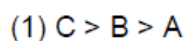
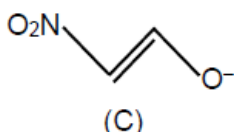
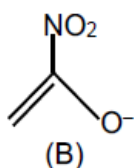
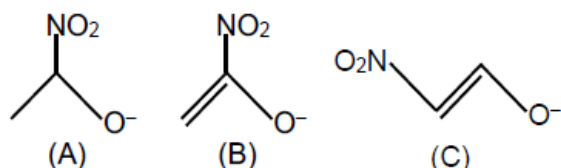
(3)

Option "A" represent Guanadine, the conjugate acid of which is resonance stabilised. The option 'B' is aliphatic amine, here the 'N' is sp^3 whereas in option 'C' the 'N' is sp^2 , hence B is more basic than C.

Q2

Stability order of following alkoxide ions is

निम्नलिखित एल्कोक्साइड आयनों के स्थायित्व का क्रम है :

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(1)

When negative charge is delocalised with electron withdrawing group like (NO_2) then stability increases.

(A) Negative charge is delocalised with NO_2 group

(B) Negative charge is delocalised with carbon of alkene

(C) Negative charge is localised

Arrange the order of C—OH bond length of the following compounds.

Methanol (A) Phenol (B) p-Ethoxyphenol (C)

निम्न यौगिकों में C—OH बन्ध लम्बाई को क्रम से व्यवस्थित कीजिए।

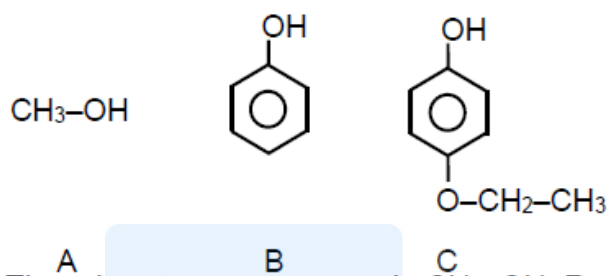
मेथेनॉल (A) फेनॉल (B) p-एथोक्सीफेनॉल (C)

- (1) A > B > C (2) A > C > B (3) C > B > A (4) B > C > A

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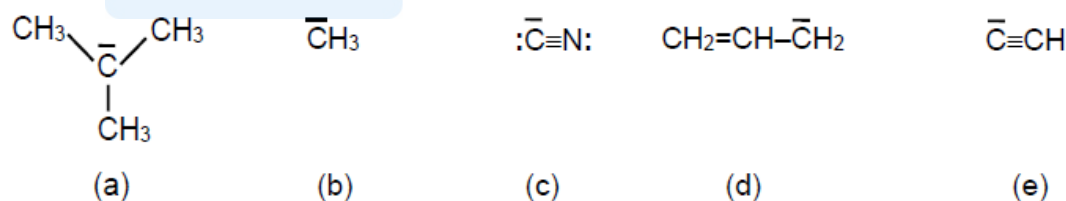
(2)



Q4

Write the correct order of basicity.

क्षारीयता का सही क्रम लिखिये—



- (1) a > b > d > e > c (2) a > b > e > d > c
(2) b > a > d > c > e (4) c > e > d > b > a

9th Jan Morning

Sol

(1)

Basicity is inversely proportional to electronegativity.

Q5

In which compound C–Cl bond length is shortest?

निम्न में किस यौगिक में C–Cl बंध लम्बाई सबसे कम है?

- (1) $\text{Cl}-\text{CH}=\text{CH}_2$ (2) $\text{Cl}-\text{CH}=\text{CH}-\text{CH}_3$
 (3) $\text{Cl}-\text{CH}=\text{CH}-\text{OCH}_3$ (4) $\text{Cl}-\text{CH}=\text{CH}-\text{NO}_2$

9th Jan Evening

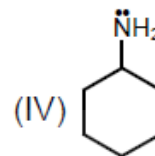
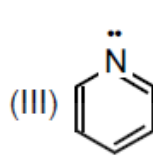
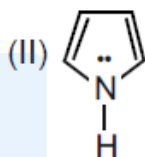
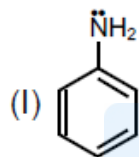
Sol

(4)
 Resonance form of $\text{Cl}-\text{CH}=\text{CH}-\text{NO}_2$ is more stable than resonance form of any other given compounds. Hence, double bond character in carbon-chlorine bond is maximum and bond length is shortest.

Q6

The order of basic character is :

क्षारीय अभिलक्षण का सही क्रम है—



(1) I > II > III > IV

(2) IV > III > I > II

(3) II > I > III > IV

(4) IV > I > II > III

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(2)
 Basic strength depends upon availability of lone pairs. Greater the resonance of lone pairs lesser the basic strength.

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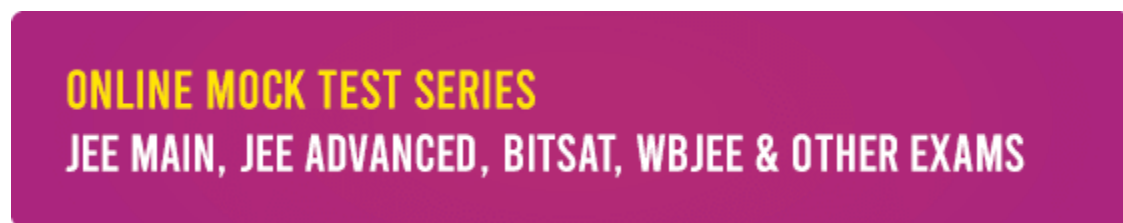
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