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India's Number 1 Education App

## CHEMISTRY

## NCERT - FULL MARKS CHEMISTRY(TAMIL)

## BASIC CONCEPTS OF ORGANIC REACTIONS

Evaluation

1. For the following reactions:
(A)
$\mathrm{CH}_{3} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{Br}+\mathrm{KOH} \rightarrow \mathrm{CH}_{2}=\mathrm{CH}_{2}+\mathrm{KBr}+\mathrm{H}_{2} \mathrm{O}$
(B) $\left(\mathrm{CH}_{3}\right)_{3} \mathrm{CBr}+\mathrm{KOH} \rightarrow\left(\mathrm{CH}_{3}\right)_{3} \mathrm{COH}+\mathrm{KBr}$

## (c)



Which of the following statement is correct ?
A. (A) is elimination, (B) and (C) are substitution
B. (A) is substitution, (B) and (C) are elimination
C. (A) and (B) are elimination and ( C ) is addition reaction
D. (A) is elimination, B is substitution and (C) is addition reaction.

## Answer: D

2. What is the hybridisation state of benzyl carbonium ion?
A. $s p^{2}$
B. $s p d^{2}$
C. $s p^{3}$
D. $s p^{2} d$

Answer: A

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3. Decreasing order of nucleophilicity is:
A. $\mathrm{OH}>\mathrm{NH}_{2}>\mathrm{OCH}_{3}>\mathrm{RNH}_{2}$
B. $\mathrm{NH}_{2}>\mathrm{OH}>\mathrm{OCH}_{3}>\mathrm{RNH}_{3}$
C. $\mathrm{NH}_{2}>\mathrm{CH}_{3} \mathrm{O}>\mathrm{OH}>\mathrm{RNH}_{2}$
D. $\mathrm{CH}_{3} \mathrm{O}>\mathrm{NH}_{2}>\mathrm{OH}>\mathrm{RNH}_{2}$

## Answer: B

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4. Which of the following species is not electrophilic in nature?
A. $\mathrm{Cl}^{+}$
B. $\mathrm{BH}_{3}$
C. $\mathrm{H}_{3} \mathrm{O}^{+}$
D. ${ }^{+} \mathrm{NO}_{2}$

## Answer: C

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5. Homolytic fission of covalent bond leads to the formation of:
A. electrophile
B. nucleophile
C. Carbo cation
D. free radica

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6. Hyper Conjugation is also known as:
A. no bond resonance
B. Baker - nathan effect
C. both (a)and (b)
D. none of these

## Answer: C

## D View Text Solution

## 7. Which of the group has highest +1 effect ?

A. $\mathrm{CH}_{3}^{-}$
B. $\mathrm{CH}_{3}-\mathrm{CH}_{2}^{-}$
C. $\left(\mathrm{CH}_{3}\right)_{2}-\mathrm{CH}^{-}$
D. $\left(\mathrm{CH}_{3}\right)_{3}-C-$

## Answer: D

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8. Which of the following species does not exert a resonance effect ?
A. $\mathrm{C}_{6} \mathrm{H}_{5} \mathrm{OH}$
B. $\mathrm{C}_{6} \mathrm{H}_{5} \mathrm{Cl}$
C. $\mathrm{C}_{6} \mathrm{H}_{5} \mathrm{NH}_{2}$
D. $\mathrm{C}_{6} \mathrm{H}_{5} \mathrm{NH}_{3}$

## Answer: D

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9. $-I$ effect is shown by:
A. $-C l$
B. $-B r$
C. both (a)and (b)
D. $-\mathrm{CH}_{3}$

Answer: C

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10. Which of the following carbocation will be most stable?
A. $P h_{3} C^{+}-$
B. $\mathrm{CH}_{3}-\stackrel{+}{\mathrm{C}} \mathrm{H}_{2}-$
C. $\left(\mathrm{CH}_{3}\right)_{2}-\stackrel{+}{\mathrm{C}} H$
D. $\mathrm{CH}_{2}=\mathrm{CH}-\stackrel{+}{\mathrm{C}} \mathrm{H}_{2}$

Answer: D
11. Assertion: Tertiary Carbocations are generally formed more easily than primary Carbocations ions.

Reason: Hyper conjugation as well as inductive effect due to additional alkyl group stabilize tertiary carbonium ions.
A. both assertion and reason are true and reason is
the correct explanation of assertion.
B. both assertion and reason are true but reason is
not the correct explanation of assertion
C. Assertion is true but reason is false
D. Both assertion and reason are false

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12. Heterolytic fission of $\mathrm{C}-\mathrm{Br}$ bond results in the
formation of-
A. free radical
B. Carbanion
C. Carbocation
D. Carbanion and Carbocation

## Answer: D

13. Which of the following represent a set of nuclephiles
?
A. $B F_{3}, H_{2} O, N H^{2-}$
B. $A l C l_{3}, B F_{3}, N H_{3}$
C. $\mathrm{CN}, \mathrm{RCH}_{2}, \mathrm{ROH}$
D. $\mathrm{H}^{+}, \mathrm{RNH}_{3}^{+}, \mathrm{CCl}_{2}$

Answer: C

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14. Which of the following species does not acts as a nucleophile?
A. ROH
B. ROR
C. $P C l_{3}$
D. $B F_{3}$

Answer: D

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15. The geometrical shape of carbocation is :
A. Linear
B. tetrahedral
C. Planar
D. Pyramidal

## Answer: C

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