

CHEMISTRY

NCERT - FULL MARKS CHEMISTRY(TAMIL)

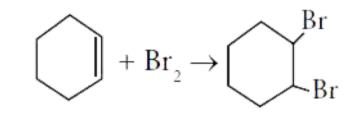
BASIC CONCEPTS OF ORGANIC REACTIONS

Evaluation

1. For the following reactions:

(A)

 $CH_3CH_2CH_2Br+KOH
ightarrow CH_2=CH_2+KBr+H_2O$ (B) $(CH_3)_3CBr+KOH
ightarrow (CH_3)_3COH+KBr$



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

(c)



2. What is the hybridisation state of benzyl carbonium ion ?

A. sp^2

 $\mathsf{B.}\, spd^2$

 $\mathsf{C.}\, sp^3$

D. sp^2d

Answer: A



3. Decreasing order of nucleophilicity is:

A. $OH > NH_2 > OCH_3 > RNH_2$

 $\mathsf{B.}\, NH_2 > OH > OCH_3 > RNH_3$

 $\mathsf{C}.\, NH_2 > CH_3O > OH > RNH_2$

 $\mathsf{D}.\,CH_3O>NH_2>OH>RNH_2$

Answer: B

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4. Which of the following species is not electrophilic in

nature ?

A. Cl^+

 $\mathsf{B.}\,BH_3$

 $\mathsf{C.}\,H_3O^+$

D. $^+NO_2$

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

Answer: D
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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
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7. Which of the group has highest +I effect ?

A. CH_3^- B. $CH_3 - CH_2^-$ C. $(CH_3)_2 - CH^-$ D. $(CH_3)_3 - C -$

Answer: D

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8. Which of the following species does not exert a resonance effect ?

A. C_6H_5OH

 $\mathsf{B.}\,C_6H_5Cl$

 $\mathsf{C.}\, C_6H_5NH_2$

D. $C_6H_5NH_3$

Answer: D

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9. -I effect is shown by:

 $\mathsf{A.}-Cl$

B.-Br

C. both (a)and (b)

 $D. - CH_3$

Answer: C

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10. Which of the following carbocation will be most stable ?

A. $Ph_{3}C^{+}$ -B. CH_{3} - $\overset{+}{C}H_{2}$ -C. $(CH_{3})_{2}$ - $\overset{+}{C}H$ D. CH_{2} = CH - $\overset{+}{C}H_{2}$

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



12. Heterolytic fission of C-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. BF_3, H_2O, NH^{2-}

B. $AlCl_3, BF_3, NH_3$

 $C.CN, RCH_2, ROH$

 $\mathsf{D}.\,H^{\,+},\,RNH_3^{\,+},\,CCl_2$

Answer: C

?



14. Which of the following species does not acts as a nucleophile ?

A. ROH

B. ROR

 $\mathsf{C}. PCl_3$

D. BF_3

Answer: D



15. The geometrical shape of carbocation is :

A. Linear

B. tetrahedral

C. Planar

D. Pyramidal

Answer: C

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