REARRANGEMENT OF CARBOCATIONS

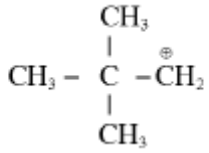
1. Carbocation $CH_3-CH_2-\overset{\oplus}{C}H_2$ rearranges to

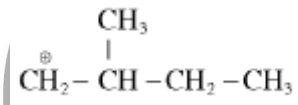
   (a) $CH_3-\overset{\oplus}{C}H-CH_3$

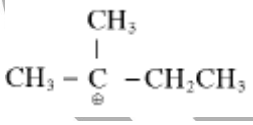
   (b) $\overset{\oplus}{C}H_2-CH_2-CH_3$

   (c) 

   (d) $CH_2=CH-\overset{\oplus}{C}H_2$

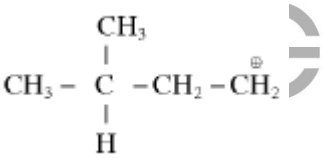
2. Carbocation  rearranges to

   (a) 

   (b) 

   (c) $CH_3-CH_2-CH_2-CH_2-\overset{\oplus}{C}H_2$

   (d) $CH_3-CH_2-\overset{\oplus}{C}H-CH_2-CH_3$

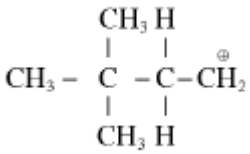
3. What will be number of α –H in finally rearranged carbocation if 
   Undergoes rearrangement

   (a) 7

   (b) 8

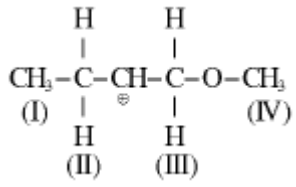
   (c) 9

   (d) 10

4. When carbocation  undergoes rearrangement to a most stable carbocation, Shifting involved are

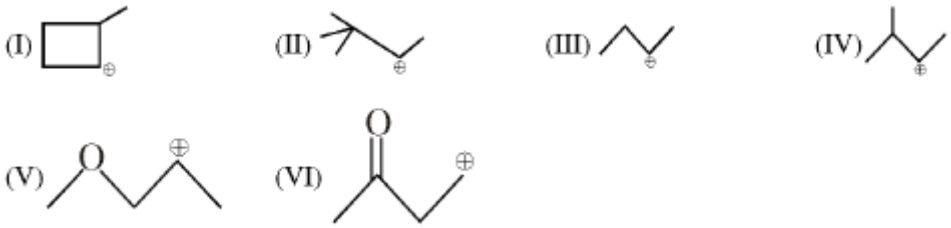
   (a) Two methyl shifts

(b) Two hydride shifts
(c) One methyl and one hydride shift
(d) Two methyl & One hydride shift

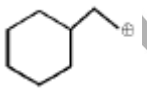


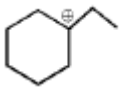
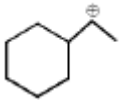
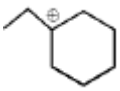
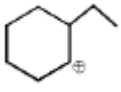
5. When carbocation undergoes rearrangement, which atom/group will migrate to produce more stable carbocation.
(a) I
(b) II
(c) III
(d) IV

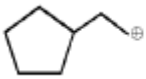
6. When following carbocations may undergo rearrangement, hydride shifting may be involved in……. number of carbocation.

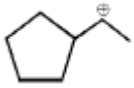


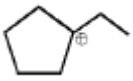
(a) 2
(b) 3
(c) 4
(d) 5

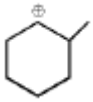
7. Carbocation  , When rearranges to most stable carbocation, which of the following is not obtained.

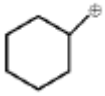
(a) 
(b) 
(c) 
(d) 

8.  when carbocation undergoes rearrangement, which the following can not be obtained

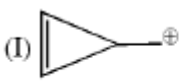
(a) 

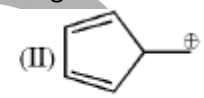
(b) 

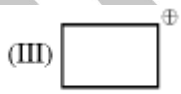
(c) 

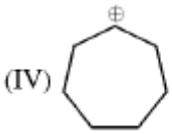
(d) 

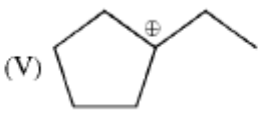
9. How many of the following carbocations will undergo rearrangement

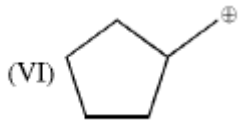












(a) 3
(b) 4
(c) 5
(d) 6

10. When carbocation  undergoes rearrangement to most stable carbocation, which of the following statement is INCORRECT about most stable carbocation.

(a) I t has 6 α −H
(b) It contains two methyl groups
(c) It is formed by ring expansion
(d) methyl shifting is involved

ANSWER KEY

Ques.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Ans.	a	b	b	c	c	b	d	d	c	d