

In the following questions, a statement of Assertion (A) followed by a statement of Reason (R) is given.

Choose the correct option out of the choices given below each question:

- (a) Assertion and Reason both are correct and Reason is the correct explanation of Assertion.
- (b) Assertion and Reason both are wrong.
- (c) Assertion is correct but Reason is wrong.
- (d) Assertion is wrong but Reason is correct.
- (e) Assertion and Reason both are correct statements but Reason is not the correct explanation of Assertion.

Question 92. Assertion (A): It is difficult to replace chlorine by -OH in chlorobenzene in comparison to that in chloroethane.

Reason (R): Chlorine-carbon (C - Cl) bond in chlorobenzene has a partial double bond character due to resonance.

Solution: (a) Due to resonance, there is double bond character between benzene ring and halogen hence, nucleophilic substitution of aryl halide is difficult as compared to alkyl halide.