

**Question 22:** Identify the oxidized and reduced species in the following reaction.  $\text{Cl}_2(\text{g}) + 2\text{Br}^-(\text{aq.}) \rightarrow 2\text{Cl}^-(\text{aq.}) + \text{Br}_2(\text{l})$

**ANSWER: OPTION 4**

In  $\text{Cl}_2$ , Cl is 0 oxidation state whereas in  $\text{Cl}^-$ , it is in -1 oxidation state. Similarly is the case of  $\text{Br}_2$  and  $\text{Br}^-$ .

As per the definition of Oxidation and reduction,  $\text{Cl}_2$  is getting reduced and  $\text{Br}^-$  is getting oxidized,

Hence option 4 is correct