

**Q 1** In nitrogen family, the H–X–H bond angle in the hydrides gradually becomes closer to  $90^\circ$  on going from N to Sb. This shows that gradually

- Ⓐ The crystal lattice of ice is mostly formed by covalent as well as hydrogen bonds
- Ⓑ The density of water increases when heated from  $0^\circ\text{C}$  to  $4^\circ\text{C}$  due to the change in the structure of the cluster of water molecules
- Ⓒ Above  $4^\circ\text{C}$  the thermal agitation of water molecules increases. Therefore, intermolecular distance increase and water starts expanding
- Ⓓ The density of water increases from  $0^\circ\text{C}$  to a maximum at  $4^\circ\text{C}$  because the entropy (disorder) of the system increases



Q 1: Ⓐ Ⓑ Ⓒ Ⓓ