

Short Answer Type Questions – I

Q. 1. Among the alkali metals which has:

- (i) Highest melting point.**
- (ii) Most electropositive character.**
- (iii) Lowest size of ion.**
- (iv) Strongest reducing character**

[DDE, 2017-18]

Ans. (i) Li has highest melting point.

(ii) Cs has most electropositive character.

(iii) Li has lowest size of ion.

(iv) Li has strongest reducing character.

Q. 2. Why is LiF almost insoluble in water whereas LiCl is soluble not only in water but also in acetone?

Ans. LiF is almost insoluble in water [0.27 g/100g H₂O] due to its high lattice energy. Due to high hydration energy of Li⁺ ion, LiCl is soluble in water. LiCl is also soluble in acetone because of its predominantly covalent nature. With the increasing size of the anion, covalent character increases.

Q. 3. Write two important uses of-

(i) Lime stone

(ii) Quick lime

[DDE, 2017-18]

Ans. (i) Uses of Limestone:

(a) It is used as a building material in the form of marble.

(b) It is used in the manufacture of quick lime.

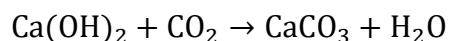
(ii) Uses of Quick lime:

(a) It is used in the manufacture of cement.

(b) It is used in the manufacture of sodium carbonate from caustic soda.

Q. 4. When CO₂ gas is passed in lime water it turns milky but in case of excess CO₂, milky appearance disappears. Support the statement by giving suitable reaction equations. [DDE, 2017-18; KVS, Guwahati Region, 2015-16]

Ans. When CO₂ gas is passed in lime water, it turns milky due to the formation of calcium carbonate.



On passing excess of CO_2 , milkiness disappears because the precipitate dissolves to form calcium hydrogen carbonate.

