SOLID STATE

Q.1 Why is glass considered a super cooled liquid?

Q.2 Ionic solids conduct electricity in molten state but not in solid state. Explain.

Q.3 Why Alkali halides do not give 'frenkel Defect'?

Q.4 Name the crystal which shows both "frenkel" as well as "schottky defects."

Q.5 Atoms of element B form hcp lattice and those of the element A occupy 2/3rd of tetrahedral voids. what is the formula of the compound formed by the elements A & B?

Q.6 Define the following terms in relation to crystalline solids.
(i) Unit cell
(ii) Coordination number
Give one example in each case.

Q.7 Aluminium crystallises in an Fcc structure. Atomic radius of the metal is 125 pm. what is length of the side of the Unit cell of the metal?

Q.8 Assertion(A): Total number of Octahedral voids present in unit cell of cubic close packing including the one that is present at the body centre, is four.
Reason(R): Besides the body centre, there is one octahedral void present at the centre of each of the six faces of the unit cell and each of which is shared between two adjacent unit cells.

which one of the following is non-crystalline or Amorphous

a) Diamond
b) Graphite
c) Glass
d) Common salt

Q.10 Nacl type crystal (with coordination no 6 : 6) Can be Converted into Csl type crystal (with Coordination no. 8 : 8) by applying.

a) high temperature
b) high pressure
c) high temperature and high Pressure
d) low temperature and low pressure.