Water

I Define

Anomalous Expansion of Water - Water ha minimum volume and maximum density at 4°c. It starts expanding below 4°c. This is called anomalous expansion of water.

II Give reasons:

a) Water is used as a cooling agent.

ns. Water is used as a cooling agent because it has high specific heat.

b) b) Water pipes burst in severe winters.

ns. Water pipes burst in severe winters where the temperature is below 4°c because ~~in~~ the ~~water~~ ice expands when the ~~tempara~~ temperature decrease due to anamalas expansion of water. The ~~fo~~ ice expands and ~~an~~ exerts pressure on the pipe leading it to burst.

c) It is difficult to cook in hills as compared to plains

ans. It is difficult to cook ~~f~~ in hills as compare to plains because the pressure in hills is less than that of plains and more the pressure more is the boiling point. Therefore in ~~hilly~~ hilly areas water ~~w~~ boils at a lower temperature where atmospheric pressure is lower than in the plains.

d) Ice floats on water.

ans. Ice floats on water because the density of water ~~de~~ decreases from 4°c to 0°c due to anomalous expansion of water. Therefore it becomes lighter than water and floats.

e) Sea water does not freeze at 0°c

ans. Sea water does not freeze at 0°c because it as many kinds of salt in it acting as an impurities - Thus it lowers the ~~bo~~ freezing point of the mixture.

III) What is the effect on boiling point of water if when

a) Pressure is increased
When pressure is increased boiling point of water also increases

b) Impurity is added
When impurity is added to water its boiling point increases.