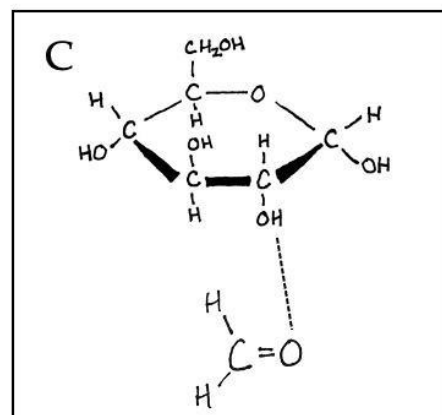
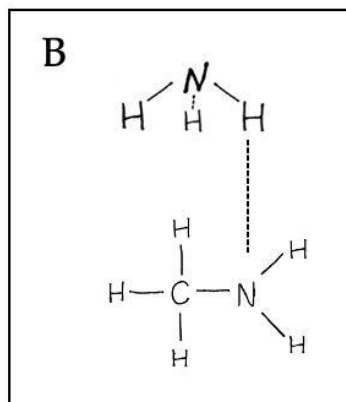
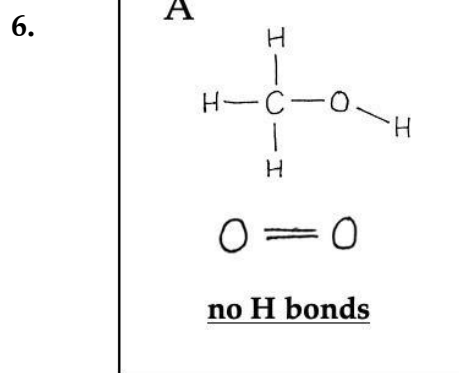
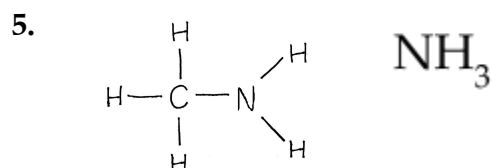


4.

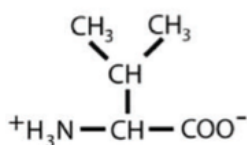


For B and C there are many other correct possible hydrogen bonds!

7. There are several correct answers to this question! Any partially charged N, O or H atom in the nucleotide could bond to the oppositely charge O or H in water.

8. H, O, or N

9. 2



10.

10. **Asp-142, Ser-89**

11. Valine's R-group is hydrophobic instead of hydrophilic. Since this R-group is on the outside of the protein, it will more likely bind to other valines on the outside of other Hb proteins instead of interacting with the polar water molecules in the cell, which leads to clumping together of the Hb.

12. d. 4 only

13. A, B and C

14. True

15. A, B, C, D, E