Intermolecular Forces - Key

For questions 1-5, identify the main type of intermolecular force in each compound:

1) carbon disulfide
~~Van der Waal forces~~ - LDF

2) ammonia
Hydrogen bonding

3) oxygen
~~Van der Waal forces~~ - LDF

4) CH_2F_2
Dipole-dipole forces

5) C_2H_6
~~Van der Waal forces~~ - LDF

Rank the following compounds by increasing melting point:

6) C_2H_6, C_2H_5OH, C_2H_5F
C_2H_6 (-183.3° C), C_2H_5F (-143.2° C), C_2H_5OH (-117.3° C)

7) H_2S, H_2O, H_2
H_2 (-259.3° C), H_2S (-85.5° C), H_2O (0° C)

8) BBr_3, BI_3, BCl_3
BCl_3 (-107.3° C), BBr_3 (-46° C), BI_3 (49.9° C)

All melting points were taken from The Handbook of Chemistry and Physics, 72nd Edition, by the Chemical Rubber Company. If you don't have a CRC, you need one because it contains all the reference material you'll ever need!