

16. Which molecular geometry is matched to CORRECT bond angles?

- a. octahedral - 90° and 180°
- b. trigonal planar - 90° and 120°
- c. tetrahedral - 120°
- d. trigonal bipyramidal - 109.5°
- e. linear - 120°

17. Which of the following is a non-polar molecule?

- a. CCl_4
- b. NH_3
- c. H_2S
- d. NF_3
- e. OF_2

18. Which of the listed molecules possesses a square planar geometry?

- a. SiCl_4
- b. SF_4
- c. XeF_4
- d. CCl_4
- e. CH_4

19. Which of the following molecules is no polar?

- a. NH_3
- b. H_2S
- c. SF_6
- d. HCl
- e. CO

20. What is the major type of force that must be overcome to allow the processes below?

I. the evaporation of propanol ($\text{CH}_3\text{CH}_2\text{CH}_2\text{OH}$)

II. the melting of solid Br_2

III. the boiling of liquid BF_3

IV. the boiling of liquid CH_2Cl_2

- a. London forces, covalent bonding, dipole-dipole, dipole-dipole
- b. London forces, London forces, London forces, London forces
- c. hydrogen bonding, dipole-dipole, dipole-dipole, London forces
- d. hydrogen bonding, London forces, London forces, dipole-dipole
- e. dipole-dipole, dipole-dipole, London forces, London forces