

### AP WORKSHEET 03B: ANSWERS

1.

- (a) A
- (b) D and F
- (c) B, C, and E
- (d) No *mobile* charge carriers (electrons or ions) – in this case, ions that are held in fixed positions in the lattice since it is ionic
- (e) G
- (f) *Mobile* charge carriers (electrons or ions) – in this case free moving valence electrons, since it is a metal
- (g) D and G. Very melting and boiling points suggest very few particles can easily become vapor, and that therefore vapor pressures will be low

2.

Covalently bonded macro structure, all strong bonds
Electrons are free to move within layers, but not from one layer to another
Closely packed array of ions allows conduction
Strong ionic lattice, strong Coulombic attractions, high melting point
Only weak, intermolecular London dispersion forces attract molecules to one another