88. The table below lists the melting points of various substances.

SUBSTANCE	PHASE CHANGE (solid → liquid)	MELTING POINT (K)
chlorine	$Cl_2(s) \rightarrow Cl_2(\ell)$	172
water	$H_2O(s) \rightarrow H_2O(\ell)$	273
sodium chloride	$NaCl(s) \rightarrow NaCl(\ell)$	1073
copper	$Cu(s) \rightarrow Cu(\ell)$	1356

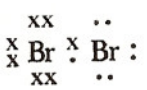
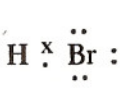
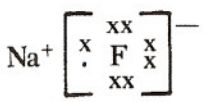
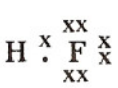
Based on this table, which type of substance has the highest melting point?

(1) nonpolar covalent
(2) polar covalent
(3) ionic
(4) metallic

89. Which substance contains particles held together by metallic bonds?

(1) Ni(s)
(2) Ne(s)
(3) $N_2(s)$
(4) $I_2(s)$

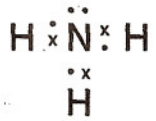
90. Which electron-dot formula represents a molecule that contains a nonpolar covalent bond?

(1) 
(2) 
(3) 
(4) 

91. Which molecule is nonpolar and contains a nonpolar covalent bond?

(1) CCl_4
(2) F_2
(3) HF
(4) HCl

92. Which molecule contains a polar covalent bond?

(1) 
(2) 
(3) 
(4) 

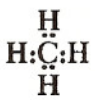
93. Which formula represents a tetrahedral molecule?

(1) CH_4
(2) $CaCl_2$
(3) HBr
(4) Br_2

94. Which formula represents a polar molecule containing polar covalent bonds?

(1) H_2O
(2) CO_2
(3) NaCl
(4) Cl_2

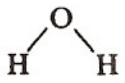
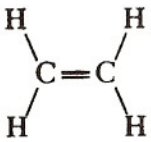
95. Which electron dot formula represents a nonpolar molecule?

(1) 
(2) 
(3) 
(4) 

96. Which two compounds contain only polar molecules?

(1) CCl_4 and CH_4
(2) HCl and Cl_2
(3) HCl and NH_3
(4) CO and O_2

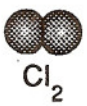
97. Which structural formula represents a linear nonpolar molecule containing two polar bonds?

(1) 
(2) 
(3) 
(4) 

98. Which is a nonpolar covalent substance?

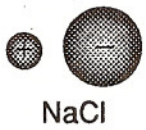
(1) CCl_4
(2) NH_3
(3) H_2O
(4) KCl

99. Which diagram best represents a polar molecule?

(1) 

(2) 

(3) 

(4) 

100. Which statement best explains why a CH_4 molecule is nonpolar?

(1) C and H are nonmetals.
(2) C and H have the same electronegativity.
(3) CH_4 has a symmetrical charge distribution.
(4) CH_4 is a gas at room temperature.