In compounds of type ECl_3, where E = B, P, As or Bi, the angles Cl—E—Cl for different E are in the order

(1999, 2M)

(a) B > P = As = Bi
(b) B > P > As > Bi
(c) B < P = As = Bi
(d) B < P < As < Bi

In BCl_3, bond angle = 120°.

In PCl_3, $AsCl_3$ and $BiCl_3$, central atom is sp^3 hybridised. Since P, As and Bi are from the same group, bond angle decreases down the group. Hence, overall order of bond angle is :

B > P > As > Bi