

**Indian Institute of Science Education and Research, Kolkata**

**Chemistry of Main Group Elements- CH3201**

**Mid-Semester Examination**

*Answer*

**Time- 1 hour 30 mins**

**Full marks- 20**

1. Draw the structure of  $B_6H_6^{2-}$ . 2
2. a) From Closo  $B_6H_6^{2-}$ , show how you can get corresponding Nido and Arachno boranes. 3
- b) Show for all three above cases how many framework electrons are there. 5
3. Solution of a compound A can dissolve excess of base and excess of oxide, what is A and how can it do so? 3
4. Write the structure of  $BeCl_2$  in solid state. 1
5. Write four examples of Zintl anions. 4
6. Why is the behaviour of  $Tl^+$  similar to Group-1 elements? 2