



### SECTION-B

- 2) Acidic character of halides of boron in the following order :  
 $\text{BBr}_3 > \text{BCl}_3 > \text{BF}_3$
- 3) What are interhalogen compounds? Why these compounds are more reactive than corresponding halogens?
- 4) Write a short note on  $p\pi$ - $p\pi$  and  $p\pi$ - $d\pi$  bonding.
- 5) What are Lewis bases? Arrange the following in the order of decreasing base strength of  $\text{NH}_3$ ,  $\text{PH}_3$  and  $\text{AsH}_3$ .
- 6) Why Zn, Cd and Hg salts are colourless?

### SECTION-C

- 7) Explain the HSAB principle. Discuss its applications.
- 8) a) Explain the paramagnetisms and ferromagnetism.  
b) Which out of the two lanthanides ion,  $\text{Lu}^{3+}$  and  $\text{Ce}^{3+}$ , will be more hydrated? Give reasons.
- 9) Explain the structure of  $\text{N}_2\text{O}$ ,  $\text{NO}$ ,  $\text{N}_2\text{O}_3$ ,  $\text{N}_2\text{O}_4$  and  $\text{N}_2\text{O}_5$ .

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