



# CHEMISTRY

## BOOKS - VIKRAM PUBLICATION ( ANDHRA PUBLICATION)

**MARCH - 2016 (ANDHRA PRADESH)**

### Section A

1. What are DO, COD and BOD ?



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2. Name two adverse effects caused by acid rains.



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3. Give the hybridization of carbon in diamond and fullerene.



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4. State and explain the Hess's law of constant heat summation.



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5. State Graham's law of diffusion.



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6. The empirical formula of a compound is  $CH_2O$ . Its molecular weight is 90. Calculate

the molecular formula of the compound.



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7. Lechatelier's principle is



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8. Define Entropy .



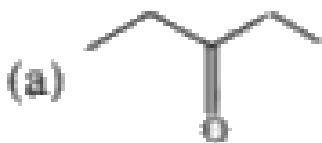
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9.  $SiF_6^{2-}$  is known while  $SiCl_6^{2-}$  is not - explain.



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10. Write the systematic names of the following



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## Section B

1. Write the postulates of kinetic molecular theory of gases .



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2. Explain the structure of diborane.



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**3. What is Hard water ? How can you remove hardness of water by Calgon method ?**



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**4. Explain different types of hydrogen bonds with examples.**



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5. What is conjugate Acid -Base pair ? Write the conjugate acid and conjugate base of  $NH_3$  and  $H_2O$



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6. Compare diploiment of  $NH_3$  molecule with that of  $NF_3$  molecule .



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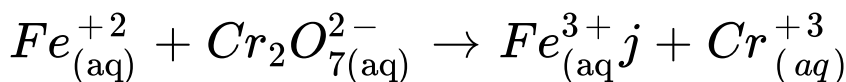


7. Discuss the various reactions that occur in the Solvay process.



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8. Balance the following equation in acid medium by ion-electron method :



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1. What are quantum numbers? Explain the significance of various types of quantum numbers.



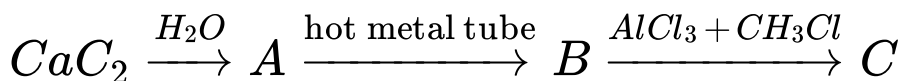
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2. Define  $IE_1$  and  $IE_2$ . Why is  $IE_2 > IE_1$  for a given atom? Discuss the factors than effect IE of an element.



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3. Complete the following reactions and name the products A,B and C.



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