

### ❖ Problems

- Q 1. Define isopoly and heteropoly metallates.
- Q 2. Explain the condensation process involved in the formation of paramolybdates.
- Q 3. Draw and discuss the structure of paramolybdate anion,  $\text{Mo}_7\text{O}_{24}^{6-}$ , in detail.
- Q 4. Draw and discuss the structure of octamolybdate anion.
- Q 5. Write down the reaction scheme giving the tungstic acid from normal tungstate with special reference to paramolybdate A.
- Q 6. Explain the structure of metatungstate,  $[\text{H}_2\text{W}_{12}\text{O}_{40}]^{6-}$ , in detail.
- Q 7. How can a Keggin structure with  $T_d$  symmetry be changed into a  $C_{3v}$  isomer?
- Q 8. Draw and explain the structure of  $[\text{NiMo}_9\text{O}_{32}]^{6-}$  and  $[\text{MnMo}_9\text{O}_{32}]^{6-}$ .
- Q 9. Why do the isopoly and heteropoly acids of molybdenum and tungsten prefer edge-sharing over the corner connection? Also, explain the highly unusual face sharing.
- Q 10. Write down the general formula for 1:12 and 2:18 heteropoly anions.

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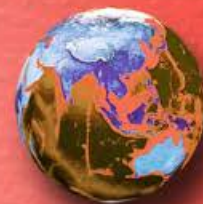
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**Volume I**

**MANDEEP DALAL**



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