

**Marks**  
**3**

- Classify each of the following as either “soluble” or “insoluble” in water at 298 K.

Compound	Solubility	Compound	Solubility
$\text{CoCl}_2 \cdot 6\text{H}_2\text{O}$		$\text{HgCl}_2$	
$\text{Li}_2\text{CO}_3$		$\text{Zn}(\text{CH}_3\text{CO}_2)_2$	
$\text{MnO}_2$		$\text{SrSO}_4$	

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- Complete the following table.

FORMULA	SYSTEMATIC NAME
$\text{NH}_4\text{Fe}(\text{SO}_4)_2 \cdot 6\text{H}_2\text{O}$	
$[\text{Cr}(\text{OH}_2)_5\text{Cl}]\text{SO}_4$	
$\text{NaH}_2\text{PO}_4$	
$\text{HClO}_4$	
$\text{As}_2\text{O}_3$	
$[\text{PdCl}_2(\text{NH}_3)_2]$	
$\text{SO}_2$	
	potassium thiocyanate
	sodium nitrite
	tetraaquadibromidocobalt(III) chloride
	sodium hexacyanidoferrate(III)
	lead(IV) oxide
	peroxide ion
	nickel(II) nitrate-6-water