

**TDC Part II**  
**Paper I, Group B**  
**Inorganic Chemistry**



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**TOPIC:- Indicators**

# Indicators

Indicators are those chemical substances that indicate the end point during titration by color change. There are three types of indicators:

1. **Internal indicators:** Indicators which are added in the conical flask containing one of the solutions are known as internal indicators. For example, phenolphthalein, methyl orange etc.

2. **External indicators:** Indicators which are used outside the conical flask (in a white tile) are known as external indicators. For example, potassium ferricyanide,  $K_3[Fe(CN)_6]$ .

3. **Self-indicators:** In titration, two solutions are used. When one of the solutions itself acts as an indicator, it is known as self-indicator viz., potassium permanganate ( $KMnO_4$ ).