Assignments

1. **What is the primary form of free carbon present in natural water?**  
   **Answer:** Dissolved organic carbon (DOC)
2. **Which instrument is commonly used for estimating total organic carbon in water?**  
   **Answer:** TOC analyzer
3. **Which form of carbon is removed before estimating free carbon in water?**  
   **Answer:** Inorganic carbon
4. **What chemical is typically used to acidify water samples before carbon analysis?**  
   **Answer:** Phosphoric acid or hydrochloric acid
5. **Which method involves combustion to estimate carbon content in water?**  
   **Answer:** High-temperature catalytic oxidation
6. **What is the unit of measurement for carbon concentration in water?**  
   **Answer:** mg/L (milligrams per liter)
7. **What type of water sample would likely have the highest free carbon content?**  
   **Answer:** Wastewater
8. **Which type of carbon includes both dissolved and particulate organic carbon?**  
   **Answer:** Total organic carbon (TOC)
9. **What gas is measured during combustion in TOC analysis to estimate carbon?**  
   **Answer:** Carbon dioxide (CO₂)
10. **Why is free carbon estimation important in water quality monitoring?**  
    **Answer:** It indicates organic pollution levels.