

TGA MCQs with Answers

1. **Thermal analysis is defined as _____.**
 - a) Measurement of concentration of materials as a function of temperature
 - b) Measurement of solubility of materials as a function of temperature
 - c) **Measurement of physical properties as a function of temperature ✓**
 - d) Measurement of line positions of crystals as a function of temperature
2. **Which method is used for the measurement of change in weight of oxysalts?**
 - a) Thermoelectric analysis
 - b) Wagner analysis
 - c) Stockbarger analysis
 - d) **Thermal analysis ✓**
3. **What are the two main techniques for thermal analysis?**
 - a) FTG and DGG
 - b) MSP and FCT
 - c) **TGA and DTA ✓**
 - d) TSA and DGF
4. **In thermogravimetric analysis, the result obtained appears as a _____.**
 - a) **Continuous chart ✓**
 - b) Continuous parabola
 - c) Continuous circular positions
 - d) Discontinuous chart

5. **What is the range of heating rate ($^{\circ}\text{C min}^{-1}$) commonly used in TGA?**
- a) **1–20** ✓
 - b) 25–50
 - c) 100–200
 - d) 150–1000
6. **Under conditions of _____ heating, decomposition usually takes place in thermogravimetry.**
- a) First order
 - b) Second order
 - c) Third order
 - d) **Dynamic** ✓
7. **The initial and final temperatures (T_i and T_f) depend on which factor in TGA?**
- a) Cooling rate
 - b) Mechanical property of the material
 - c) Thermal expansion coefficient
 - d) **Atmosphere above the sample** ✓
8. **What does TGA stand for?**
- a) Thermal Gas Analysis
 - b) **Thermogravimetric Analysis** ✓
 - c) Thermal Gradient Analysis
 - d) Thermal Gravimetric Assessment
9. **The principle of TGA is based on measuring changes in _____.**
- a) Temperature

b) **Mass** ✓

c) Volume

d) Pressure

10. **Which component is essential for measuring mass changes in TGA?**

a) Monochromator

b) **Balance** ✓

c) Thermocouple

d) Detector