

1. What is a sensor? Explain and make some examples
2. Explain the difference between analogical and digital signals
3. Describe the inverse piezoelectric effect and its use in quartz crystal microbalance
4. Describe the use of nanomaterials in the fabrication of sensors through illustrative examples
5. What is a self-assembled monolayer?
6. Describe the function of bio-recognition elements in biosensors through illustrative examples
7. How can field effect transistors be used for sensing purposes?
8. Describe a micro-analytical technique used for the characterization of surfaces
9. Describe a possible method for the synthesis of nanoparticles
10. Describe the working principle of electrochemical impedance spectroscopy