Tutorial 2 questions to solve:

1. Why knowing the characteristics of sensor is important?
2. If I provide you a T type thermocouple which is ideal for measuring very low temperature and instruct you to measure -273ºC, will it be possible to measure the temperature by that thermocouple? Provide explanation supporting your answer.
3. In quantum computing, researchers often need to operate quantum bits (qubits) at extremely low temperatures to minimize thermal noise and decoherence, which can disrupt quantum states. These systems are cooled to just a few millikelvin (mK) above absolute zero, which is about -273.15°C. If I provide you a E type thermocouple, will you be able to use this for measuring the temperature? Provide explanation supporting your answer.
4. Explain the concept of sensitivity based on linear and nonlinear curve of an instrument.
5. “If there is no drift, the reproducibility is 100%,” Explain.
6. Explain the concept of significant figure taking one real time example.
7. Explain the concept of a dynamic system considering the input as static and dynamic both.