

MET 352 Engineering Design
Department of Materials and Metallurgical Engineering
South Dakota School of Mines and Technology

Short Response 4: Jan 23, 2019

Answer only one question.

If you answer more than one, only the first answer will be considered.

1. What are three common problems arising when setting design requirements?

- Making bad assumptions
- Writing implementation (HOW) instead of requirements (WHAT)
- Describing operations instead of writing requirements
- Using incorrect terms
- Using incorrect sentence structure or bad grammar
- Missing requirements
- Over-specifying

Or

2. Cite two of the four things a good specification should include.

- Identify minimum requirements
- List reproducible test methods to be used in testing for compliance with specifications
- Allow for a competitive bid
- Provide for an equitable award at the lowest possible cost.

Or

3. What is the difference between a Requirement and a Constraint?

Or

4. List three Types of Constraints.

- Types of constraints
- **Functional, Safety, Quality, Manufacturing, Schedule, Economic,** Ergonomic, Ecological, Aesthetic, Life-Cycle, Legal/Ethical