Safety Considerations in Design

1 Multiple Choice 1 point

What is the primary reason engineers must prioritize safety in their designs?

- To ensure faster project completion
- To minimize project costs
- To meet client demands for aesthetics
- To enhance public safety, minimize risks, and protect the environment

2 Multiple Choice 1 point

Which strategy involves designing structures to handle conditions beyond expected levels?

- Redundancy
- Safety Margins
- Fail-Safe Design
- Probabilistic Risk Assessment

3 Multiple Choice 1 point

What was one of the critical safety design failures in the 2010 Deepwater Horizon Incident?

- Use of 3rd party contractors
- Neglecting environmental considerations
- Lack of adequate risk assessment and redundancy in safety systems
- Excessive investment in safety systems

4 Multiple Choice 1 point

What is a common method engineers use to account for uncertainty in their designs?

- Prioritizing aesthetics over safety
- Ignoring low-probability risks
- Simplified modeling
- Conservative design and worst-case scenario planning

5 Multiple Choice 1 point

Which of the following is an example of a fail-safe design?

- A bridge designed with multiple layers of redundant structural supports
- A redundant control system in an airplane
- A circuit breaker that automatically shuts off power during a fault
- A monitoring system that records structural performance over time