

# Welfare Considerations in Design

1

Multiple Choice 1 point

What is the functional definition of welfare in civil engineering?

- ☐ Minimizing project costs and timelines
- ☐ Ensuring complete equity in all engineering decisions
- ☐ Maximizing societal benefits without disproportionately disadvantaging others
- ☐ Maximizing project efficiency regardless of societal impact

2

Multiple Choice 1 point

What is a "sacrifice zone" as described in the lesson?

- ☐ An area designated for cultural preservation
- ☐ A location where projects are exempt from environmental regulations
- ☐ A high-priority zone for infrastructure development
- ☐ A region that bears the costs of a project for the greater societal good

3

Multiple Choice 1 point

Which principle underpins welfare considerations by ensuring no group can be made better off without making another group worse off?

- ☐ Pareto Optimality
- ☐ Cost-Benefit Analysis
- ☐ Utility Ethics
- ☐ Environmental Justice

4

Multiple Choice 1 point

In the context of welfare considerations, what is one limitation of Pareto optimality?

- ☐ It assumes equity is always achievable.
- ☐ It ignores societal benefits.
- ☐ It does not account for the severity of harm experienced by certain groups.
- ☐ It prioritizes environmental preservation over economic growth.

5

Multiple Choice 1 point

Which of the following strategies is recommended to ensure successful welfare consideration in engineering projects?

- ☐ Focus solely on reducing costs to achieve maximum efficiency.
- ☐ Use decision matrices to evaluate design alternatives based on societal, environmental, and economic factors.
- ☐ Avoid public consultations to minimize project delays.
- ☐ Exclude marginalized groups from stakeholder engagement to streamline decisions.