



## **SoulShift - Educational Q&A Platform**

### **General Questions**

Practice Questions



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**Q1. For a beam with a moment of inertia  $I$ , what is the relationship between deflection and load?**

- A. Directly proportional
- B. Inversely proportional
- C. Independent
- D. Quadratic

*Solution: The deflection of a beam is inversely proportional to its moment of inertia ( $I$ ); as  $I$  increases, deflection decreases.*

**Q2. What is the maximum deflection for a cantilever beam with a point load at the free end?**

- A.  $PL^3/3EI$
- B.  $PL^4/8EI$
- C.  $PL^3/48EI$
- D.  $PL^2/2EI$

*Solution: The maximum deflection ( $\delta$ ) for a cantilever beam with a point load ( $P$ ) at the free end is given by  $\delta = PL^3/3EI$ .*



