

# Mechanical Engineering Basics for Teens

Mechanical Engineering · Practice Test · 10 Questions

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**1. Which of the following is the primary function of a gear?**

- A) To store electrical energy
- B) To transmit rotational motion and torque
- C) To create light
- D) To filter air

**2. What is the main purpose of a bearing in a mechanical system?**

- A) To generate heat
- B) To reduce friction between moving parts
- C) To amplify sound
- D) To increase pressure

**3. Which force causes an object to resist changes in its state of motion?**

- A) Gravity
- B) Friction
- C) Inertia
- D) Magnetism

**4. What is the principle that states for every action, there is an equal and opposite reaction?**

- A) Archimedes' Principle
- B) Newton's First Law of Motion
- C) Pascal's Principle
- D) Newton's Third Law of Motion

**5. Which material is commonly used in engines because of its high strength and resistance to heat?**

- A) Plastic
- B) Glass
- C) Aluminum alloy
- D) Wood

**6. What do we call the process of shaping metal by heating it and then hammering or pressing it into a desired form?**

- A) Casting
- B) Welding
- C) Forging
- D) Machining

**7. In a simple lever, what is the point around which the lever pivots called?**

- A) Load
- B) Effort
- C) Fulcrum
- D) Resistance

**8. What is the primary role of a piston in an engine?**

- A) To cool the engine
- B) To convert linear motion into rotational motion (or vice versa)
- C) To ignite the fuel
- D) To lubricate moving parts

**9. Which type of energy is stored in a stretched rubber band?**

- A) Kinetic energy
- B) Thermal energy
- C) Potential energy
- D) Electrical energy

**10. What is the process of removing material from a workpiece using a cutting tool?**

- A) Assembly
- B) Inspection
- C) Fabrication
- D) Machining