

Mechanical Engineering Basics for Young Learners

Mechanical Engineering · Answer Key · 20 Questions

1. Which of these is a common type of simple machine used to make work easier by reducing the force needed?

- A) Computer
- B) Lever**
- C) Microscope
- D) Telescope

2. What is the scientific study of motion and forces called?

- A) Biology
- B) Chemistry
- C) Physics**
- D) Geology

3. Which of the following is a fundamental property of matter that describes its resistance to changes in motion?

- A) Velocity
- B) Acceleration
- C) Mass**
- D) Energy

4. A device that converts one form of energy into another is called a:

- A) Sensor
- B) Actuator
- C) Transducer**
- D) Resistor

5. What is the term for the rate at which work is done or energy is transferred?

- A) Force
- B) Power**
- C) Momentum
- D) Torque

6. Which material is commonly used in engineering for its strength and ability to be shaped into complex forms?

- A) Water
- B) Plastic
- C) Wood
- D) Metal**

7. What is the process of designing, building, and testing machines called?

- A) Archaeology
- B) Anthropology

C) Mechanical Engineering

- D) Astronomy

8. A gear is a type of wheel with teeth that are designed to mesh with teeth on another gear. What is the primary function of gears?

- A) To cool down engines

B) To transmit rotational motion and torque

- C) To measure temperature
- D) To generate electricity

9. Which of these is a fluid that is not easily compressed?

- A) Gas
- B) Plasma

C) Liquid

- D) Solid

10. What is the name for the force that opposes motion between two surfaces in contact?

- A) Gravity
- B) Tension

C) Friction

- D) Buoyancy

11. What is the study of how heat flows and how energy can be converted between different forms?

- A) Aerodynamics

B) Thermodynamics

- C) Optics
- D) Acoustics

12. A tool used to turn a fastener, such as a screw or bolt, by applying torque is called a:

- A) Hammer

B) Wrench

- C) Saw
- D) Pliers

13. Which of these describes the ability of a material to withstand deformation under stress?

- A) Brittleness
- B) Malleability
- C) Strength**
- D) Elasticity

14. What is the process of removing material from a workpiece using cutting tools?

- A) Assembly
- B) Welding
- C) Machining**
- D) Fabrication

15. Which simple machine consists of a grooved wheel on an axle or shaft, used to change the direction of a force or to gain mechanical advantage?

- A) Wheelbarrow
- B) Pulley**
- C) Inclined Plane
- D) Screw

16. What is the term for the measure of how hot or cold something is?

- A) Pressure
- B) Volume
- C) Temperature**
- D) Density

17. Which engineering discipline deals with the design, construction, and maintenance of mechanical and electro-mechanical systems?

- A) Civil Engineering
- B) Electrical Engineering
- C) Mechanical Engineering**
- D) Chemical Engineering

18. What is the path an object follows as it moves through space called?

- A) Velocity
- B) Speed
- C) Trajectory**
- D) Acceleration

19. A sealed container holding a fluid under pressure, often used for powering machinery, is called a:

- A) Battery
- B) Generator
- C) Hydraulic Cylinder**
- D) Transformer

20. What is the fundamental unit of force in the International System of Units (SI)?

- A) Joule
- B) Watt
- C) Newton**
- D) Pascal