

Introduction to Mechanical Engineering

Mechanical Engineering · Answer Key · 25 Questions

1. Which of these is considered a simple machine?

- A) Computer
- B) Lever**
- C) Electric motor
- D) Toaster

2. What type of energy is stored in a stretched rubber band?

- A) Kinetic energy
- B) Nuclear energy
- C) Elastic potential energy**
- D) Chemical energy

3. Which mechanical component is used to transmit rotational motion between two shafts?

- A) Gear**
- B) Battery
- C) Spring
- D) Piston

4. What is the primary function of a lubricant in a mechanical system?

- A) To increase heat
- B) To reduce friction**
- C) To generate electricity
- D) To store data

5. Which unit is commonly used to measure force?

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

6. What simple machine uses a wheel and a rope to lift heavy objects?

- A) Screw
- B) Wedge
- C) Pulley**
- D) Inclined plane

7. Which material property describes a metal's ability to be hammered into thin sheets?

A) Elasticity

B) Malleability

C) Conductivity

D) Magnetic

8. What is the main purpose of a screw?

A) To cut objects

B) To hold materials together

C) To conduct electricity

D) To cool engines

9. Which of these is a type of energy produced by a moving object?

A) Kinetic energy

B) Potential energy

C) Static energy

D) Thermal energy

10. What mechanical device converts linear motion into rotary motion, commonly found in car engines?

A) Crankshaft

B) Belt

C) Spring

D) Nut

11. Which simple machine consists of a sloping surface used to raise objects?

A) Pulley

B) Wedge

C) Inclined plane

D) Lever

12. What do engineers call the point on which a lever pivots?

A) Load

B) Fulcrum

C) Force

D) Input

13. Which device is used to measure the temperature of a mechanical part?

- A) Barometer
- B) Thermometer**
- C) Speedometer
- D) Anemometer

14. What is the force that opposes motion between two surfaces in contact?

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

15. Which of these components is used to store and release mechanical energy?

- A) Gear
- B) Spring**
- C) Bolt
- D) Nut

16. What is the main function of an axle in a wheel-and-axle system?

- A) To act as a wedge
- B) To rotate with the wheel**
- C) To store fuel
- D) To increase friction

17. Which form of energy is associated with the temperature of an object?

- A) Thermal energy**
- B) Electrical energy
- C) Sound energy
- D) Light energy

18. Which of these is a rigid bar resting on a pivot?

- A) Lever**
- B) Screw
- C) Wedge
- D) Gear

19. What type of machine is a pair of scissors?

- A) Compound machine**
- B) Simple machine only
- C) Digital device
- D) Electronic engine

20. Which part of a machine is designed to prevent unwanted movement?

A) Brake

B) Motor

C) Gear

D) Shaft

21. What is the standard unit of power in the International System of Units (SI)?

A) Watt

B) Ampere

C) Ohm

D) Coulomb

22. Which simple machine is essentially an inclined plane wrapped around a cylinder?

A) Screw

B) Pulley

C) Lever

D) Wheel

23. What happens to the kinetic energy of an object when it slows down?

A) It increases

B) It decreases

C) It disappears

D) It becomes gravity

24. Which tool is used to tighten a nut or a bolt?

A) Wrench

B) Hammer

C) Saw

D) File

25. What is the main role of a gear train in a machine?

A) To change speed or torque

B) To generate heat

C) To store electricity

D) To stop a machine