

Awesome Machines: Mechanical Engineering for Kids

Mechanical Engineering · Practice Test · 25 Questions

1. What is a simple machine that uses a slanted surface to help lift heavy objects?

- A) Lever
- B) Pulley
- C) Wheel and axle
- D) Inclined plane

2. Which type of energy is used by a wind turbine to generate electricity?

- A) Solar energy
- B) Heat energy
- C) Kinetic energy
- D) Chemical energy

3. What is the part of a car engine that converts fuel into mechanical energy?

- A) Tire
- B) Spark plug
- C) Piston
- D) Windshield

4. What is the main purpose of a gear in a machine?

- A) To make things colder
- B) To change the speed or direction of rotation
- C) To create light
- D) To store water

5. What common household item uses a screw mechanism to tighten or loosen things?

- A) Spoon
- B) Hammer
- C) Jar lid
- D) Chair

6. Which simple machine is used to lift or move heavy objects using a rope or chain wrapped around a wheel?

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

7. What is the force that pulls objects towards the center of the Earth?

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

8. What is the main component of a bicycle that allows it to roll smoothly?

- A) Handlebars
- B) Pedals
- C) Wheels
- D) Seat

9. What process is used to shape metal by heating it until it is soft and then hammering it into a new form?

- A) Cutting
- B) Welding
- C) Forging
- D) Drilling

10. Which type of engine powers most airplanes?

- A) Steam engine
- B) Electric motor
- C) Jet engine
- D) Diesel engine

11. What is the scientific study of force and motion called?

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

12. What material is commonly used to make strong, lightweight airplane parts?

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

13. What does a thermostat in a house do?

- A) Makes music
- B) Controls the temperature
- C) Cleans the air
- D) Turns on the lights

14. What simple machine consists of a rod passing through a hole, allowing rotation?

- A) Pulley
- B) Wheel and axle
- C) Inclined plane
- D) Lever

15. What is the force that resists motion between two surfaces in contact?

- A) Gravity
- B) Push
- C) Friction
- D) Pull

16. What is a device that converts electrical energy into mechanical energy?

- A) Battery
- B) Light bulb
- C) Motor
- D) Speaker

17. What is the process of joining two pieces of metal together using heat and filler material called?

- A) Cutting
- B) Drilling
- C) Melting
- D) Welding

18. What is the main purpose of a brake system in a car?

- A) To speed up
- B) To turn
- C) To slow down or stop
- D) To honk the horn

19. What type of energy does a stretched rubber band store?

- A) Heat energy
- B) Kinetic energy
- C) Potential energy
- D) Light energy

20. What is a large, rotating fan used to move air, often found in buildings?

- A) Clock
- B) Blender
- C) Ventilator
- D) Television

21. What is the term for the resistance of an object to changes in its state of motion?

- A) Speed
- B) Velocity
- C) Momentum
- D) Inertia

22. What tool is used to cut through materials with a sharp, toothed edge?

- A) Hammer
- B) Wrench
- C) Saw
- D) Screwdriver

23. What is the process of a solid turning directly into a gas called?

- A) Melting
- B) Evaporation
- C) Sublimation
- D) Condensation

24. What part of a clock or watch shows the time passing?

- A) Case
- B) Battery
- C) Hands
- D) Strap

25. What is the force exerted by a fluid (like air or water) on an object moving through it?

- A) Gravity
- B) Friction
- C) Drag
- D) Tension