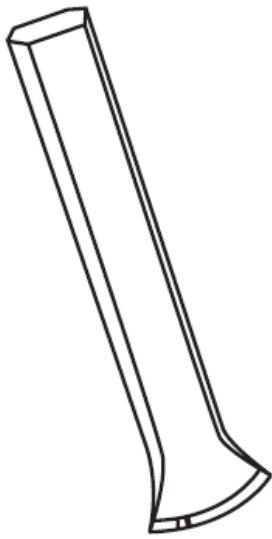


# Mechanical and Spatial Aptitude Sample Questions (Section A)

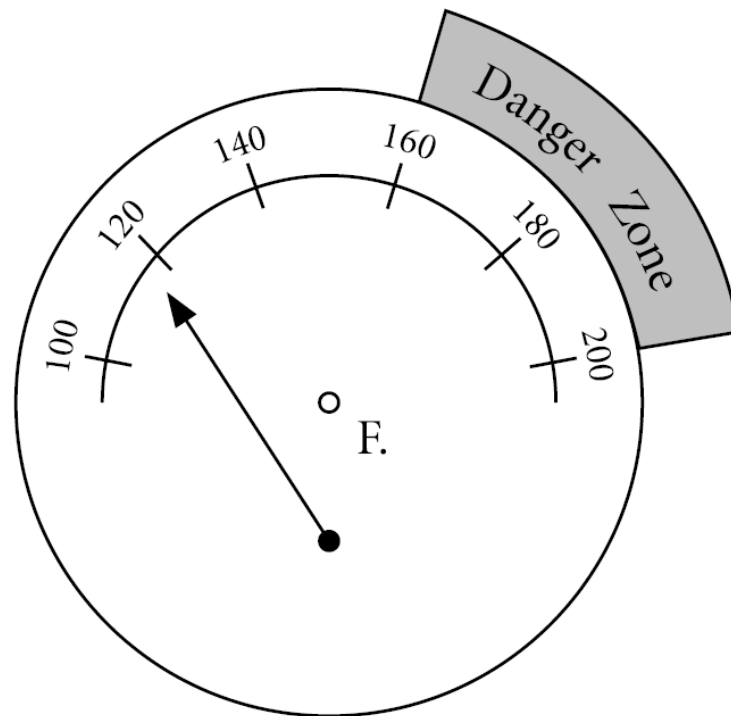
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- 1.** Which of the following tools is used to smooth or level a piece of wood?
- a. a wrench
  - b. a screwdriver
  - c. a plane
  - d. a hammer



- 2.** The tool shown above would most likely be used to
- a. drive nails.
  - b. weld metal.
  - c. tighten bolts.
  - d. carve wood.

- 3.** The figure above shows a piston that is connected to a crankshaft by a tie rod. The crankshaft has a radius of 1.0 inch. If the crankshaft rotates 180 degrees (one half of a revolution), how far downward will the piston be pulled?
- 0.5 inches
  - 1.0 inch
  - 1.33 inches
  - 2.0 inches

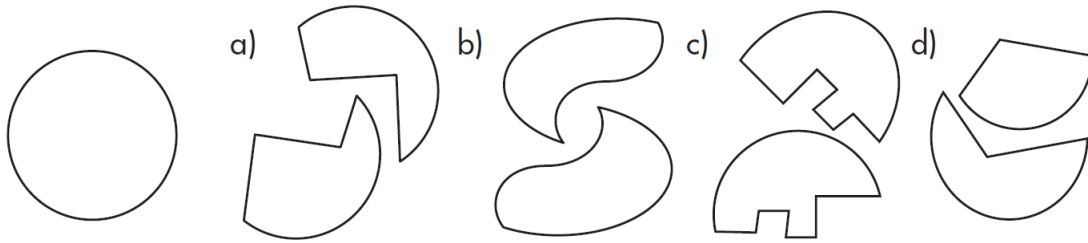


Identify the object in rotated position

- 4.**
- 
- Option a) shows the block rotated slightly clockwise from the reference position.
  - Option b) shows the block rotated further clockwise.
  - Option c) shows the block rotated significantly clockwise.
  - Option d) shows the block rotated almost 90 degrees clockwise.

Select single answer that represents the two parts that join together to make a given whole

5.



## Engineering and General Knowledge Sample Questions (Section B)

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1. Which one of these is a unique property of a Closed Loop Control System
  - a. Provision to alter the Set point
  - b. Provision of a Feedback Mechanism
  - c. Provision of a Measuring Cell Transducer
  - d. Provision of a Control Element
2. Which one of these is an example of Waste Energy Recovery in a Diesel Engine
  - a. Flywheel
  - b. Alternator driven by the Flywheel
  - c. Exhaust gas Turbocharger
  - d. Cooling tower or radiator
3. Elasticity is a property defined as
  - a. Ability to resist deformation when subjected to load
  - b. Ability to deform permanently when subjected to load
  - c. Ability to deform temporarily when subjected to load
  - d. Ability to break without undergoing deformation

4. Stress is defined by which one of these formula
- Force / Area
  - Pressure x Area
  - Force x Area
  - Pressure / Force
5. The formation of frost in cooling coils in a refrigerator
- Increases power consumption
  - increases heat transfer
  - Improves COP of the system
  - reduces power consumption
6. Given below is a sentence in which all or part of the sentence is in capital letters. You are asked to choose the best phrasing of the part from four alternatives.
- SINCE WE ARE LIVING IN NEW YORK for five years, we are reluctant to move to another city.
- Since we are living
  - Being that we are living
  - Being that we have been
  - Since we have been living
7. The basic function of the centrifugal pump impeller is to
- Directly increase the pressure of the liquid being pumped.
  - Directly increase the velocity of the liquid being pumped
  - Convert the potential energy of the liquid to kinetic energy
  - To create a positive suction pressure