

**Strength of Materials**  
**Important 10mark questions**

**Unit I**

1. Explain the operation of cupola furnace with a simple cross-section view.
2. What are the essential conditions for equilibrium of rigid body?

**Unit II**

1. With a neat sketch, describe the electron beam welding process. List out the advantages of this process.
2. List and explain the various mechanical properties of materials.

**Unit III**

1. Explain about hydraulic process with a neat sketch.
2. Explain shearing operations.

**Unit IV**

1. With a neat sketch, explain the principal parts of capstan lathe.
2. Draw the SFD and BMD for a simply supported beam subjected to a point load 'W' at its midpoint.

**Unit V**

1. Draw a neat sketch of an upright drilling machine, indicate important features and explain its working.
2. With neat sketches, explain the various types of springs.