

## **SSC JE Mains 2019**

### **Branch- Mechanical**

#### **Thermo**

1. Reversible Heat Engine Derivation
2. Numerical on Heat Engine
3. Explain P-T Curve
4. Numerical on Isothermal compression

#### **SOM & Mechanics**

1. Numerical on Resultant of forces
2. Numerical- Friction (Push & Pull)
3.  $\sigma$  Vs Strain Curve
4. Poisson's Ratio
5. Shear Modulus
6. Volumetric Strain

#### **TOM & MD**

1. Numerical on Flywheel
2. Numerical on Governor
3. Derivation of equation  $T_1/T_2 = e^{\mu\theta}$
4. Derivation of Law of Gearing

#### **RAC/PP/IC Engine**

1. Numerical on IC Engine
2. Numerical on Bell-Colum
3. Regenerative Cycle efficiency
4. Derivation- Gas Turbine
5. SI engine classification

#### **FM/Hydraulics**

1. Numerical on Viscous flow through pipe
2. Numerical on Pelton wheel
3. Viscosity, Newtonian & Non-Newtonian fluid, Compressible & Incompressible fluid.
4. Classification of pump.