

**Syllabus for M.Tech Entrance Examination - 2018-19 will be as follows:**

- a. **Bonding/ Crystal structure:** Such as Rock salt, Perovskite Zinc blend, wurzit, Diamond, Graphite, Coordination number, packing factor.
- b. **Thermodynamics and Phase equilibrium:** Phase rule, Enthalpy, Entropy, Laws of Thermodynamics, Eutectic, Eutectoid.
- c. **Mechanical, Thermal, Electrical, Magnetic Properties:-**  
**Mechanical:** Elastic & Plastic deformation and ductile, brittle fracture, Fracture toughness.  
**Electrical:** Band Structure, Polarization, Conductors, semiconductors, and dielectrics.  
**Thermal:** Thermal conductivity, thermal expansion coefficient, thermal shock resistance  
**Magnetic:** Dia, para, ferro, ferri - magnetic materials, hund's rule, Ceramic magnets, application and properties of ceramic magnets, hysteresis.
- d. **Ceramic Processing: Shaping, Drying, Sintering, etc.**