**BBDNITM**

**MECHANICAL DEPARTMENT**

**SESSION (2018-19)**

**Subject- Material Science [RME-301]**

**Assignment No. - 3**

**Short Answer Type question**

1. What is Gibbs Phase rule?
2. What do you mean by solidification?
3. What is homogenous and hetrogenous nucleation?
4. What do you mean by pure substance?

**Long answer type question**

1. Draw and explain Iron carbon equilibrium phase diagram for ferrous materials.
2. What do you understand by Solid solutions? Also explain substitutional and interstitial solid solutions.
3. Explain Hume Rothary rule.
4. Comparative the microstructure of various types of Steel.
5. What do you mean by sample preparation? What is etchant? why etching is required for microstructure analysis?