**BBDNITM**

**MECHANICAL DEPARTMENT**

**SESSION (2018-19)**

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

**Assignment No. - 1**

Short answer type question

1. Why cast iron is more brittle than steel?
2. Give three properties of cast iron which reflect the superiority over steel.
3. Explain the smart materials with examples.
4. Differentiate the nodular and malleable cast iron.
5. What is APF and coordination number?
6. What is Miller indices?
7. Define Surface imperfection with example.
8. Define line defect. How it is different from point defect?

Long answer type question

1. What is duralumin? Give it’s composition and application?
2. Explain the Bragg’s method for crystal analysis.
3. Name the composition of Gun metal and Babbit metal?
4. Distinguish Brass and Bronze?
5. What is Ficks laws of diffusion? Explain in brief
6. Write short note on BCC, FCC and HCP Structures.
7. What is cast iron? Explain various types of cast iron their properties and application.