AMR-17 METAL JOINING AND POWDER METALLURGY

1. Fundamental of bonding,
2. Welding arc and arc physics,
3. Power sources for arc welding, Arc welding processes,
4. High power density welding processes (EB, LBW, PAW),
5. Resistance welding processes, Solid-state welding-Friction-stir welding,
6. Welding Metallurgy and weldability of Ferrous and Nonferrous Metals & alloys, Brazing,
7. Soldering and Adhesive bonding, Brazability and Solderability of metals and alloys,
8. Defects in welded, brazed and soldered joints and its significance,
9. Destructive and Non-destructive testing of welded joints,
10. Weldability test.
11. Powder Metallurgy: Powder production methods,
12. Powder characterization, compaction, sintering and relevant theories,
13. Application of powder metallurgy, a few typical powder-metallurgy products.

Reference Book:

1. Powder Metallurgy, Erhard Klar (American Society of Metals)
2. Introduction to Particulate Technology, Martin Rhodes (Jhon- Wiley)
3. Powder Metallurgy Technology, G. S. Upadhayaya