

Code :9A03301

R9

II B.Tech I Semester(R09) Supplementary Examinations, May 2011
MATERIALS SCIENCE & ENGINEERING
(Aeronautical Engineering, Mechanical Engineering)

Time: 3 hours

Max Marks: 70

Answer any FIVE questions
All questions carry equal marks

1. Discuss the effect of grain boundaries on the properties of alloys.
2. Discuss different types of solid solutions with examples.
3. With a neat figure describe Fe-Fe₃C diagram.
4. Classify and describe the properties of steel.
5. What are TTT diagrams? Explain their use in metallurgy.
6. Explain the structure and properties of titanium.
7. What are crystalline ceramics? How are they different from cermets?
8. Classify composites. Explain and give an example for each classification.

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