

IV B.Tech I Semester Supplementary Examinations, April/May 2005
STEEL MAKING
(Metallurgy & Material Technology)

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. Write short notes on:
 - (a) Cementation process
 - (b) K aldo process
 - (c) Refractoriness for basic Bessemer.
 - (d) Phosphorous control in steel.
2.
 - (a) Discuss in detail, the role of slags in steel making.
 - (b) Indicate the typical slag composition for any two steel making processes.
3.
 - (a) Compare induction furnace operation and electric arc furnace operation with respect to capacity, chemistry, productivity and operating practice.
 - (b) Discuss in detail, the different options with respect to slag practice in EAF operations.
4. Write short notes on:
 - (a) Role of vacuum in ladle furnaces practice
 - (b) Effect of carbon on melting practice
 - (c) LF slags
 - (d) need for desulphurization.
5. Discuss in detail the principle and procedures for degassing of steel.
6. Write short notes on:
 - (a) Indian mini-steel plants
 - (b) ESR process
 - (c) Productivity in continuous casting
 - (d) AOD process.
7. Describe in detail, the principle and operation of a continuous casting machine.
8. Describe in detail the construction and operation of an open hearth furnace.
