

**III B.Tech II Semester Supplementary Examinations,
November/December 2005
IRON PRODUCTION
(Metallurgy & Material Technology)**

Time: 3 hours**Max Marks: 80**

**Answer any FIVE Questions
All Questions carry equal marks**

1. (a) What is the necessity of agglomeration of Iron ores? Explain the various processes [9]
(b) What is the importance of sintering in steel plants? Explain [7]
2. (a) Mention all the parts of a blast furnace. Explain any one of them. [9]
(b) What are the chief causes of blast furnace refractory failure? Explain. [7]
3. Write short notes on
(a) Foundation of blast furnace [8]
(b) Bosh angle of blast furnace [8]
4. (a) Describe the physical structure of a blast furnace. [8]
(b) Describe the reactions in Tuyere zone of blast furnace. [8]
5. (a) What is the role of Magnesia in the blast furnace slags? [5]
(b) How silicon is controlled with Indian blast furnace slags? [6]
(c) How sulphur is controlled with Indian blast furnace slags? [5]
6. (a) Draw a neat sketch of variable stock line armaer (cylindrical design) and Explain. [8]
(b) Draw a neat sketch of variable stock line armaer (conical design) and Explain. [8]
7. (a) How 'High top pressure' helps in improving production? Explain. [8]
(b) What are the charging devices for 'high top pressure' in blast furnace? Explain [8]
8. (a) Describe the HyL process of sponge Iron production. [6]
(b) Explain the advantages and disadvantages of HyL process of sponge Iron production [5]
(c) Explain the future of DR technology of Iron making. [5]
