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**Eighth Semester B.E. Degree Examination, July/August 2022**  
**Foundry Technology**

Time: 3 hrs.

Max. Marks: 100

**Note:** Answer any FIVE full questions, selecting atleast TWO questions from each part.

**PART – A**

- 1 a. What is Fluidity? Explain the factors affecting Fluidity. (08 Marks)  
b. What is Degassing? List the different methods of degassing. (06 Marks)  
c. Write a short note on Hot Tearing. (06 Marks)
- 2 a. Briefly explain any four design considerations for Sound casting. (08 Marks)  
b. Sketch and explain Directional Solidification. (08 Marks)  
c. Write a short note on 'Model making as an Aid in design'. (04 Marks)
- 3 a. Explain Homogeneous and Heterogeneous Nucleations. (08 Marks)  
b. Briefly explain the influence of Solidification rate, time and Chvorinov's rule on mold characteristics and cast metal. (08 Marks)  
c. Write a brief note on Cast Metal Structure. (04 Marks)
- 4 a. Sketch and explain the Components of a Gating System. (08 Marks)  
b. Briefly explain the purpose, functions and requirements of a Riser. (08 Marks)  
c. Write a brief note on Exothermic materials used in Risers. (04 Marks)

**PART – B**

- 5 a. Sketch and explain the process of Vacuum Moulding. (08 Marks)  
b. Sketch and explain the working of Cokeless Cupola. (08 Marks)  
c. Mention the advantages and disadvantages of High Pressure Moulding. (04 Marks)
- 6 a. Briefly explain the Melting practice employed in Steel Casting Foundry. (08 Marks)  
b. Briefly discuss the melting practice of Malleable Iron Castings. (08 Marks)  
c. Write a short note on Cleaning of Steel Castings. (04 Marks)
- 7 a. Briefly discuss the Melting of Aluminum Alloy Castings. (08 Marks)  
b. Briefly discuss the general characteristics of Common Cast Copper Alloys. (08 Marks)  
c. Write a brief note on Magnesium based Alloys. (04 Marks)
- 8 a. What is Mechanization? Mention the advantages and disadvantages of Mechanization in Foundry. (08 Marks)  
b. Briefly explain the Material handling equipments used in Foundry. (08 Marks)  
c. What are the advantages of a Good Foundry Layout? (04 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.