



Sri Vidya College of Engineering and Technology
Virudhunagar – 626 005



Department of Mechanical Engineering

ME6302 Manufacturing Technology I

Question Bank / Unit 1 - METAL CASTING PROCESSES

PART-A (2 MARKS)

1. Name four types of commonly used patterns
2. What is the merit of CO₂ process?
3. State the essential properties of moulding sand
4. Give any two merits and demerits of investment casting process
5. Mention any two merits and demerits of die casting
7. List out any four defects in casting
8. What is meant by split pattern
9. Define the term mould
10. What are the defects caused by low pouring temperature?
11. What is meant by match plate pattern making?
12. How will you calculate grain fineness number?
13. How patterns differ from casting?
14. What are the tests carried out to determine the quality of casting?
15. What are the functions of riser?
16. What are core prints?
17. What are the functions of gating and risering?
18. What is the composition of moulding sand?
19. What is the function of core?
20. Which process is called “Lost wax process”? Why?

PART-B (16 MARKS)

1.
 - i. Discuss the properties of moulding sand
 - ii. What are the various moulding methods, explain them
2.
 - i. Explain the working principle of investment casting
 - ii. Discuss the casting defects and their inspection methods
3.
 - i. What are the pattern making allowances and briefly explain them
 - ii. Describe centrifugal casting process
4.
 - i. Describe the shell moulding process
 - ii. Explain the ceramic moulding process and state its merits and demerits
5.
 - i. What are the factors which govern the selection of a proper material for pattern making?
 - ii. What are the specific advantages of match plate patterns? Explain how they are used for making mould
6.
 - i. Classify the types of patterns and sketch any three of them
 - ii. What is core and explain how to make a core?
7.
 - i. Explain the construction and operation of Cupola furnace with diagram
 - ii. Write a short note on “Chills”
8.
 - i. Describe various materials used for making patterns. What are its merits and demerits
 - ii. What are the basic requirements of core sand? How does it differ from the moulding sand?
9.
 - i. What are the different types of furnace used in foundry? Describe in detail with neat sketches any one of them
 - ii. Describe the steps involved in the preparation of green sand mould with cope and drag pattern
10.
 - i. Briefly explain cold-chamber die casting process with a neat sketch
 - ii. What are the advantages of centrifugal casting?