

FOUNDRY TECHNOLOGY

ASSIGNMENT – 1

Submission last Date : 30/09/2019

Descriptive questions [7 marks]

1. Write how pattern is different than casting? Explain pattern color coding system.
2. Write pattern allowances using schematic diagram.
3. Write short note on Die casting
4. Write steps for mould making using two piece patterns.
5. Explain centrifugal casting with neat sketch.
6. Write casting quality inspection techniques. Explain any one NDT in detail.

7. Explain shell molding process in detail.
8. Explain investment casting process in detail.
9. Explain various sand properties.
10. Explain elements of gating system in detail.
11. Explain various methods of tasting for finding defects.
12. Explain modernization of foundry.
13. Explain centrifugal casting technique in detail.
14. Explain Die Casting technique in detail.

15. Define a pattern? Explain types of pattern with neat sketch.
16. Which are the materials used in pattern making? Which one is better for steel casting? Explain in detail all pattern materials.
17. Explain the principle, construction and working of electric arc furnace in foundry.
18. Explain various molding methods used in a foundry. Which method is best suited for making flywheels? Differentiate hand molding and machine molding.
19. Explain principle, construction and working of cupola furnace in a foundry. For which purpose this furnace is used?
20. Differentiate green sand and dry sand. Explain each type of sand with its application.
21. What is a core? Why and where it is used? Explain any five types of cores with its application.
22. What is shot blasting? How a casting is cleaned? Elaborate cleaning methods of casting.
23. Which investment is carried out in investment casting? Explain the process in detail.
24. What is a shell in shell mould casting? Which sand is used in shell mould casting? Explain the process in detail.

Short questions [4 marks]

25. Draw any four type of core.
26. Compare sand casting, investment casting and die casting using various characteristic.
27. Write short note on mould materials used for mould making.
28. Write application of die casting, investment casting.
29. Explain with cause and remedies (1) Crack (2) shrinkage.
30. Differentiate between bottom gating system and part gating system in detail.
31. Explain Antioch casting in detail.

32. Explain any two pattern materials.
33. Differentiate hand and machine molding.
34. Differentiate open and blind risers.
35. Explain reasons for casting defects and its remedies.
36. Explain annealing heat treatment of casting.
37. Explain sand preparation for molding.
38. Explain stages of combustion in cupola furnace.

Short questions [3 marks]

39. Draw any three type of pattern.
40. Write short note pattern making.
41. Write functions of various hand tools used in foundry.
42. Write advantage, disadvantages of casting process.
43. Write short note on visual inspection of casting and identification of related defect.
44. Draw part gating system showing different gating elements.
45. Write short note on shell molding.

46. Explain any two types of patterns in detail.
47. Differentiate green and dry molding sand.
48. Explain riser functions in detail.
49. Explain various casting defects in brief.
50. Write principle and working of induction furnace.
51. How sand is reclaimed in foundry?
52. Write principle of electric arc furnace.