

6/5/19
(FULL TIME)
B.E/B.Tech DEGREE EXAMINATIONS, APR/MAY 2019

Third Semester

MF8301 Manufacturing Engineering R-2012

~~MF8301~~ CASTING AND WELDING TECHNOLOGY

Time: Three hours

Maximum: 100 Marks

Answer ALL questions

PART A-(10 × 2 = 20 marks)

1. What is the difference between runner and sprue?
2. What do you mean by core seat?
3. List out any four methods used in casting cleaning.
4. Write down the difference between two types of squeeze casting.
5. What are various weld positions?
6. What is the need for post or Pre weld treatment welding?
7. What are the parameters affect the explosive weld quality?
8. What are the types of transducers used in ultrasonic welding?
9. Write short note on robot welding.
10. Write short note on use of computers in foundry.



PART B-(5 × 16 = 80 marks)

11. i) Enumerate about pollution control in foundry (8)
ii) Explain how vision system can be employed in welding automation. (8)
 12. a.i) Explain the construction and operation of any one type Induction furnace. (8)
ii) What are the three design requirements of riser? Explain them with examples. (8)
- Or
- b.i) Explain any eight properties you would consider in the selection of pattern material. (8)
ii) Briefly discuss about progressive and directional solidification. (8)
13. a.i) Enumerate shell moulding process with neat sketch (8)
ii) Explain with neat sketch True centrifugal casting (8)

Or

- b. Explain various steps involved in Precision investment casting process with

necessary sketches.

(16)

14 a. i) Explain the equipment of an Oxy-Acetylene gas welding.

(8)

ii) Enumerate with neat sketch various heat affected zones in welding.

(8)

Or

b.i) Give the classification of welding electrodes. Explain.

(8)

ii) Discuss various steps involved in Liquid penetrant testing

(8)

15.a i) Explain about the equipment and operation of GTAW process.

(8)

ii) Explain about two types of underwater welding.

(8)

Or

b.a) i) Explain the variants of Thermit welding process.

(8)

ii) Distinguish between brazing and soldering.

(8)

