

Roll No.

Total No. of Questions : 09]

[Total No. of Pages : 02

Paper ID [A0806]

(Please fill this Paper ID in OMR Sheet)

B.Tech. (Sem. - 3rd)

MANUFACTURING PROCESSES - I (ME/PE - 209)

Time : 03 Hours

Maximum Marks : 60

Instruction to Candidates:

- 1) Section - A is Compulsory.
- 2) Attempt any Four questions from Section - B.
- 3) Attempt any Two questions from Section - C.

Section - A

Q1)

(10 × 2 = 20)

- a) Name the different types of pattern allowances.
- b) Define gas welding.
- c) Name the different types of casting furnaces.
- d) What is penetration?
- e) Define a riser.
- f) What is welding joint embrittlement?
- g) Draw the symbol of seam welding.
- h) What is critical radius of nucleus in grain growth?
- i) What are the functions of filler materials?
- j) Name the five casting defects.

Section - B

(4 × 5 = 20)

Q2) Differentiate between Soldering & Brazing.

Q3) Describe the process, advantages and limitations of centrifugal casting process.

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Q4) What are core and core prints? Explain the different types of cores.

Q5) Explain the solidification process of steel.

Q6) What is electric arc welding? Describe the arc welding equipment with the help of suitable sketches.

Section - C

(2 × 10 = 20)

Q7) Describe the different elements of a gating system? How riser & gating system is designed?

Q8) (a) How the effective and efficient moulding design will help to obtain sound casting?

(b) Explain the process, advantages and disadvantages of electro-slag welding.

Q9) (a) What is difference between directional & progressive solidification?

(b) What is plasma arc in welding? How welding arc is stabilized?

