

Roll No.....

Total No. of Questions : 09]

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Paper ID [PE209]

(Please fill this Paper ID in OMR Sheet)

B. Tech. (Sem. - 3rd)

MANUFACTURING PROCESS - I (PE - 209)

MAY 2008

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) Discuss various types of patterns used.
- b) What are the different allowances for patterns?
- c) What are the various types of cores?
- d) What is directional solidification?
- e) What do you understand by term segregation?
- f) How welding processes are classified?
- g) What are various welding positions?
- h) What is meant by arc blow?
- i) List various thermal effects on weldment.
- j) Define welding.

Section - B

(4 × 5 = 20)

Q2) Discuss various cleaning and finishing operations for castings.

Q3) Discuss the moulding sand composition and various properties of moulding sand.

Q4) What are the metallurgical effects of welding? Also explain mechanism of metal transfer.

Q5) What is the principle of resistance welding and explain briefly its types.

Q6) Differentiate between brazing and soldering. Also give their applications.

Section - C

(2 × 10 = 20)

Q7) What are the various casting defects? Discuss their causes and remedies.

Q8) (a) Differentiate between MIG and TIG.

(b) Explain laser beam welding with neat sketch.

Q9) Write short notes on :

(a) Vacuum Casting

(b) Inspection methods for castings

(c) Electron beam welding

(d) Friction welding.

