

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (ME-2011 Batch) (Sem.-3rd)
MANUFACTURING PROCESSES-I
 Subject Code : BTME-305
 Paper ID : [A1142]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A**I. Answer briefly :**

- (a) What are core prints ?
- (b) List down the limitations of die casting process.
- (c) What is directional solidification ?
- (d) Name any four welding defects.
- (e) Explain the principle of thermit welding.
- (f) What is the purpose of a riser ?
- (g) What is a sprue ?
- (h) What is machining allowance ?
- (i) Why are steels more difficult to cast than cast irons ?
- (j) What is braze welding ?

SECTION-B

2. Give the step-by-step procedure of investment casting.
3. Briefly describe the various elements of a good gating system.

4. Explain the principle and working of submerged arc welding.
5. What are the merits of DC arc welding over AC arc welding? Give some specific applications of DC arc welding.
6. Explain the phenomenon of nucleation and grain growth in metal casting. What is critical size of the nucleus?

SECTION-C

7. What is non-destructive testing ? Explain any one method of non-destructive testing in detail.
8. Explain the various types of casting defects. Give remedies for each defect.
9. Write short notes on :
 - (a) Selection criteria for manufacturing process.
 - (b) Cleaning and finishing of castings.

