

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(ME) (2011 Onwards) (Sem.-3)

MANUFACTURING PROCESSES-I

Subject Code : BTME-305

M.Code : 59115

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION 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

1. Answer briefly :

- a. What is the function of core in metal casting?
- b. Write different types of casting furnaces.
- c. What is weldability?
- d. Name different types of patterns.
- e. Write the principle of resistance welding.
- f. State the difference between upset and flash welding.
- g. How heat is generated in Thermit welding process?
- h. List five welding defects.
- i. Differentiate destructive and non-destructive testing.
- j. Write classification of electrodes.

SECTION-B

2. What is the principle of gas welding? Also, explain about various types of flames in gas welding.
3. Describe in detail about the general trend in manufacturing.
4. Explain arc welding processes. Also, write short notes on (i) Soldering (ii) Brazing
5. Explain ultrasonic inspection and dye penetrate test.
6. Explain explosive welding with suitable sketch and write its applications.

SECTION-C

7.
 - a) What is the difference between directional and progressive solidification?
 - b) What is welding arc? Explain the characteristics of welding arc.
8. Explain the principle of submerged arc welding with the help of neat sketch. Discuss its applications, merits and demerits.
9.
 - a) Explain investment casting. Also write its advantages and disadvantages.
 - b) Define welding defects. Write causes and remedies of following welding defects;
 - i) Spatter
 - ii) Overlap
 - iii) Undercut

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.