

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (AE) (Sem.–4th)
MANUFACTURING PROCESSES
Subject Code : AE-204
Paper ID : [A0710]

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 has to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students has to attempt any **TWO** questions.

SECTION-A

1. Answer briefly :

- (a) What is draft allowance ?
- (b) What are core prints ?
- (c) Give the general composition of moulding sands.
- (d) What is the purpose of a riser ?
- (e) What is the difference between cold, warm and hot forging ?
- (f) What is the difference between extrusion and drawing ?
- (g) What is dead metal zone in extrusion process ?
- (h) What do you understand by HAZ in welding ?
- (i) Briefly explain braze welding.
- (j) Give the principle of resistance welding.

SECTION-B

2. Draw a neat sketch of a conventional twist drill and show the significant angles on it.

3. Describe the different types of cutters used in milling operations, and give an application of each type.
4. Describe the elements of a good gating system in casting operations with the help of a neat sketch.
5. List down the various non-traditional machining processes. Explain any one of them briefly.
6. Explain the difference between direct and indirect extrusion with the help of neat sketches.

SECTION-C

7. Explain the differences between shell mould casting and permanent mould casting from the stand point of process and applications.
8. List down five important welding defects. Give the causes of these defects and suggest suitable remedies.
9. Describe the basic components of a common lathe machine. Briefly explain the various types of machining operations that can be performed on a lathe. What is a turret lathe ?