

Roll No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Total No. of Pages : 02

Total No. of Questions : 09

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

MANUFACTURING PROCESSES

Subject Code : BTAE-304

Paper ID : [A1149]

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. Write briefly :**

- a) What are the desirable characteristics of Cores and Core Sands?
- b) What is permeability? How it is measured?
- c) What is the principle of Friction Welding?
- d) How the heat is produced in Electron Beam Welding?
- e) What are surface defects in Rolled products? What are the causes of these defects?
- f) Give the advantages and draw backs of forging process.
- g) What are desirable properties of cutting fluids in machining?
- h) What is indexing in milling process?
- i) What are the applications of ECM?
- j) What is the working principle of Abrasive water jet machining?

SECTION-B

2. Explain various types of pattern allowances.
3. Explain Deep Drawing process. Give its applications.
4. Explain surface grinding with suitable sketch. Where it is used?
5. Compare direct and indirect extrusion process with neat sketch.
6. List various cutting tool materials. What are the properties of Cemented carbides?

SECTION-C

7. What is the principle of resistance welding? Explain their types and applications.
8. Discuss various casting defects, their causes and remedies.
9. Write short note on **any two** :
 - a) Chemical Machining.
 - b) Electric Discharge Machining
 - c) Laser Beam Machining