

Code No: C3305, C5205**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****M.Tech I - Semester Examinations, March/April-2011****SPECIAL MANUFACTURING PROCESS****(COMMON TO ADVANCED MANUFACTURING SYSTEMS, DESIGN FOR
MANUFACTURING)****Time: 3hours****Max. Marks: 60****Answer any five questions
All questions carry equal marks**

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1. a) Explain the various types of cleaning methods.
b) Write the process of electroforming and its applications, advantages and limitations. [12]
2. a) Briefly describe chemical vapor deposition.
b) Write the process of Ion implantation. [12]
3. a) Classify different types of ceramics and its applications, characteristics.
b) Briefly describe:
 - i) Drying
 - ii) Sintering.
 - iii) Hot Compaction. [12]
4. Write short notes on:
 - a) Fibre reinforced composites.
 - b) Polymer matrix composites. [12]
5. a) Write about crystal growth and wafer preparation.
b) What techniques are used for producing printed circuits board? Explain any two of them. [12]
6. a) Briefly describe the integrated electronics and its applications.
b) Write about computer aided design in micro electronics. [12]
7. Write short notes on:
 - a) High speed machining.
 - b) Micro machining. [12]
8. Classify the rapid prototyping techniques and explain any one technique with a neat sketch and its applications, advantages and limitations. [12]
