

Code No: C3305, C5205**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****M.TECH I - SEMESTER EXAMINATIONS, APRIL/MAY-2012****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**

- - -

- 1.a) Explain about economics of coating.
- b) Briefly describe electro forming.
- c) Explain about Diamond Coating & Cladding.

- 2.a) What is hot compaction and write its areas of applications?
- b) Explain about processing of particulate ceramics with its applications.

- 3.a) What are the types of film deposition and mention their major functions?
- b) List out various techniques used for film deposition? Explain any one of them.

- 4.a) Explain crystal growth with czochralski process (the most widely used method for crystal growth).
- b) Define the term "Integrated circuit" and mention its advantages.

- 5.a) Explain silicon wafer preparation and film deposition process with sketches.
- b) What are the 3 common methods used for production of PCB?

- 6.a) What is micromachining? Explain the steps involved.
- b) What are the techniques available for fabrication of 3D structures on the micrometer scale? Explain.

- 7.a) What is E-manufacturing? Mention its applications and advantages.
- b) Explain about high speed machining.
- c) Is nano technology good or bad? If so why? Explain.

- 8.a) What are various methods of rapid prototyping? Briefly explain their working principles.
- b) What are the limitations of fused deposition method?

* * * * *