# JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD 

M.Tech II - Semester Examinations, March/April 2011 COMPUTER AIDED PROCESS PLANNING (CAD/CAM)

Time: 3hours
Max. Marks: 60

## Answer any five questions

All questions carry equal marks

1. a) Discuss the Structure of Automated process planning system and compare it with conventional process planning.
b) With a neat diagram explain the working of generative CAPP system. Mention the advantages and limitations of it.
[6+6]
2. a) Explain the information flow in a retrieval - type CAPP system and compare it with generative CAPP system.
b) Briefly describe various quantitative methods for optimal selection of a manufacturing sequence.
[6+6]
3. a) Describe the effect of various machining parameters on production rate.
b) Mention the various methods for determine the machining parameters. Briefly explain the advantages of mathematical approach over conventional approach.
4. a) What is tolerance? Distinguish between Design tolerance and manufacturing tolerance.
b) Explain the integration of design and manufacturing tolerances and mention the advantages of integrated approach over sequential approach.
5. a) Determine the optimal index positions for executing fixed sequence in NC tool path generation.
b) Describe the functioning of MIPLAN system.
6. a) Explain various feature recognition approaches in CAPP with examples.
b) Describe the role of Group Technology in Computer Aided Process Planning.
[6+6]
7. a) What are the various factors to be considered for the optimal selection of machining parameters?
b) Illustrate with an example the determination of manufacturing tolerance for a given component.
8. a) Discuss the role of machinability data system in Computerized Process Planning.
b) Mention the various criteria to be considered for the selection of a CAPP system.
