**Code No: D0410** 

**R09** 

## 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

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- 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. [6+6]
- 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. [6+6]
- 5. a) Determine the optimal index positions for executing fixed sequence in NC tool path generation.
  - b) Describe the functioning of MIPLAN system.

[6+6]

- 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. [6+6]
- 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.

[6+6]

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