National Exams December 2012

98-Ind-B8, Computer Integrated Manufacturing (CIM)

3 hours duration

NOTES:

1. If doubt exists as to the interpretation of any question, the candidate is urged to submit with the answer paper, a clear statement of any assumptions made.

2. This is an OPEN BOOK EXAM.
   Any non-communicating calculator is permitted.

3. FIVE (5) questions constitute a complete exam paper.
   The first five questions as they appear in the answer book will be marked.

4. Each question is of equal value.

5. Most questions require an answer in essay format. Clarity and organization of the answer are important.
1. Discuss the various items that constitute a database. How are databases generated? What are the important factors in the use and implementation of databases?

2. Describe the various stages in a Computer-Aided-Design (CAD) system.

3. What are the advantages of a Computer-Aided Process Planning (CAPP) system over traditional process planning methods?
4. What are the basic levels of coding of parts? Give examples and brief description of two major industrial coding systems.

5. What are the goals of the JUST-IN-TIME (JIT) concept? Discuss the advantages of JIT.

6. Suggest a routing sheet for one of the following:

   a) an automotive connecting rod
   b) a computer blade
   c) a glass bottle, or
   d) injection-molding die