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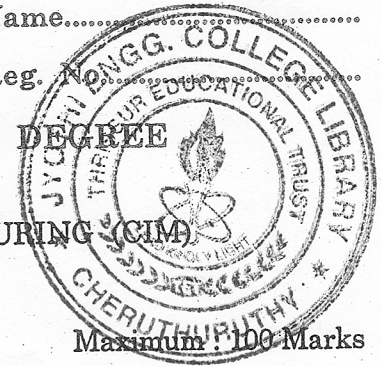
Reg. No.....

SIXTH SEMESTER B.TECH. (ENGINEERING) DEGREE
EXAMINATION, JUNE 2011

ME 04 603—COMPUTER INTEGRATED MANUFACTURING (CIM)

(2004 admissions)

Time : Three Hours



Answer all questions.

Part A

- I. (a) List the advantages of Numerical Control.
- (b) Explain the difference between NC and CNC.
- (c) Explain NC part programming with one example.
- (d) Write notes on Programme Languages.
- (e) Explain Group Technology.
- (f) Explain the different salient features of ASRS.
- (g) What are the functions of FMS control ?
- (h) Explain on-line and off-line programming.

(8 × 5 = 40 marks)

Part B

- II. (a) (i) Describe features of incremental and absolute systems with one example.
(ii) Explain the design considerations of NC machine tools.
Or
(b) Explain the different methods of improving machine accuracy and productivity.
- III. (a) Explain fixed block word address and variable block formats.
Or
(b) Explain point to point programming and contour programming concepts with one example.
- IV. (a) Discuss with an example, the principle of operation of a programmable logic controller.
Or
(b) Explain the following :—
 - (i) Material handling in CIM.
 - (ii) Vehicle guidance.
 - (iii) Vehicle management and safety.
- V. (a) What are the various types of FMS layouts ? Explain them schematically.
Or
(b) (i) What are the various types of joints used for the construction of a robot manipulator ?
(ii) What are the industrial applications of robots ?

(4 × 15 = 60 marks)