

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE SEM-VII Examination-Nov/Dec.-2011**

**Subject code: 172501****Date: 19/11/2011****Subject Name: Computer Aided Manufacturing****Time: 10.30 am-01.00 pm****Total marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Explain with suitable examples how CAM is better than conventional manufacturing. What are its limitations? **07**  
(b) Differentiate NC, CNC and DNC machines with their relative merits and demerits. **07**

- Q.2** (a) Describe factors affecting for selection of component for machining on CNC machine. **07**  
(b) What is parity checking? Explain representation of ISO and EIA numerical control codes in punched tape. **07**

OR

- (b) Classify the NC machines based on motion control system with neat sketches. **07**

- Q.3** (a) Describe various components of CNC machine with features and possible sketches. **07**  
(b) Select a job of your choice and prepare a part program including a canned cycle. **07**

OR

- Q.3** (a) Explain subroutine, Do loop and Macro with suitable examples. **07**  
(b) Classify and explain robots in brief. **07**

- Q.4** (a) Classify and explain robot configurations with neat sketches. **07**  
(b) Describe various sensors used in robot technology. **07**

OR

- Q.4** (a) What is CIM? Draw and explain CIM wheel. **07**  
(b) Classify CAPP and explain any one with suitable example. **07**

- Q.5** (a) What is mechatronics? How it is integrated? How it is useful in development of modern industries? **07**  
(b) Explain closed loop system along with explanation of each component with neat sketch. **07**

OR

- Q.5** (a) Define RPT. Explain how RPT is useful in modern industrial context. What are its limitations? **07**  
(b) Explain SLS with relative merits and demerits. **07**

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