

Code No: C0407**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****M.Tech I Semester Examinations, March/April 2011****MECHATRONICS****(CAD/CAM)****Time: 3hours****Max. Marks: 60**

Answer any five questions
All questions carry equal marks

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1. Discuss briefly the following mechatronic systems
 - a. Engine management system
 - b. Automatic camera
 - c. Automatic washing machine[12]

2. a) What are the advantages and limitations of hydraulic actuators?
b) What are the special features which pneumatic actuators should process? [12]

3. a) What is an automatic control system? What are its advantages and limitations?
b) Explain the concept of fuzzy control applied to mechatronic system. [12]

4. a) Explain the use of microprocessors in mechatronic system.
b) State the advantages and uses of programmable logic controllers. [12]

5. What are the different data bases used in manufacturing? Explain them in detail. [12]

6. Explain in detail about various motion control aspects to be considered in design of mechatronic system. [12]

7. a) Discuss the features of the digital transducers used for interfacing.
b) Explain the application of machine vision in mechatronics. [12]

8. Write short note on any three of the following.
 - a) Intelligent machine Vs. Automatic machine.
 - b) Adaptive control
 - c) System design classification.
 - d) Human machine.[12]
