R09

Code No: C0407

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M.TECH I SEMESTER EXAMINATIONS, APRIL/MAY-2012
MECHATRONICS
(CAD/CAM)

Time: 3hours **Max. Marks: 60**

Answer any five questions
All questions carry equal marks
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1.a) What are the various electrical actuators? Explain the working principle of any one electrical actuator.
b) What are the various linear slides used in the mechatronic systems?

2.a) Differentiate between intelligent machine and automatic machine.
b) Explain the concept of load to motor inertia mismatching with one example.

3.a) Define and state the differences between adaptive control and fuzzy control.
b) Explain with an example the Fuzzy logic compensatory control.

4.a) Explain the role of programmable logic control in present automation industries.
b) Explain the use of timers and counters in programmable logic control.

5.a) Explain the principle of operation of inductive sensor and capacitive sensor
b) Explain the working principle of potentiometer and accelerometer.

6.a) What is machine vision? Explain the important components used in a machine vision system
b) Explain the concept of perception and cognition in decision making.

7.a) Explain CAD/CAM data base management system.
b) Explain the procedure of Data manipulation manufacturing data base management system.

8. Write short note on the following
a) Object oriented concepts in CAD data base system
b) Pattern recognition in Machine Vision
c) Sensors for motion measurement.

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