ROLL NO .....

2008 VINAYAKA MISSION'S UNIVERSITY

B.E DEGREE EXAMINATION

MECHATRONICS

B.E MECHANICAL ENGINEERING

JULY 2008

TIME : 3 HOUR
MARK : 75

ANSWER ALL THE QUESTIONS: 10 X 2 = 20

1. How will you calculate the error signal?

2. What are the elements of the closed loop control system?

3. Write about absolute encoder.

4. What are the types of thermocouples?

5. Differentiate a complier and an interpreter.

6. Write about ASCII.

7. What is ladder programming?

8. Give an example for input and outputs of PLC.

9. What are the disadvantages of the bimetallic thermostat?

10. How will you generate time delay in timed switch?

SECTION – B ANSWER ANY FIVE QUESTIONS: 5 X 5 = 25

11. Suggest a sensor that could be used as part of a control system, to determine the difference in levels between liquids in two containers. The output is to provide an electrical signal for the control system.

12. Write about the advances in memory technology.

13. Write detail about a bout Timers.

14. Write about the advances in memory technology.

15. Draw the architecture of a PLC.

16. Design the car park barrier system with block diagram of the microprocessor.

17. Devise a timing circuit that will switch an output on for 1 S then off for 20 S, then on for 1S, then off for 20 S and so on.

18. Explain the function of a programmable logic controller.

SECTION – C ANSWER ANY TWO QUESTIONS: 2 X 15 = 30

19. Design a pick and place robot.

20. Write about the interfacing D/A and A/D converters.

21. Design an automatic car park system.