

Code :R5322205

R5

III B.Tech II Semester(R05) Supplementary Examinations, April/May 2011
PC BASED INSTRUMENTATION
(Instrumentation & Control Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE questions
All questions carry equal marks

1. Explain in detail the bus structure with in a computer system, with the help of a block diagram.
2. Explain the functions, capabilities and specifications of VME bus.
3. Explain how loops and nested loops are implemented in C programming give an example for each.
4. Describe the feasibility of following chips: EPROM, EEPROM, and NOVRAM.
5. Draw the ladder diagram to represent:
 - (a) Two switches are normally open and both have to be closed for a motor to operate.
 - (b) A lamp is to be switched on if there is an input from sensor A or sensor B.
 - (c) A light is to come on if there is no input to a sensor.
 - (d) A motor is switched on by pressing a spring - return push button start switch and the motor remains on until another spring - return push button stop switch is pressed.
6. Explain the different types of registers available in a PLC.
7. Explain PLC PID functions with examples.
8. Explain the following:
 - (a) HART protocol.
 - (b) Smart transmitters.
