Course Title : AVR Micro Controller Laboratory			
Course Code: P18CSL56	**Semester : 5**	**L:T:P - 0 : 0 : 3**	**Credits: 1.5**
Contact Period : Practical :3 Hr, Exam: 3 Hr		**Weightage :CIE:50% SEE:50%**	

Part-I
PROGRAMMING

1. Data Transfer - Block move, Exchange, Sorting, Finding largest element in anarray.
2. ArithmeticInstructions-Addition/subtraction,multiplicationanddivision,square, Cube – (16 bits Arithmetic operations – bit addressable).
3. Counters.
4. Boolean & Logical Instructions (Bitmanipulations).
5. Conditional CALL &RETURN.
6. Code conversion: BCD – ASCII; ASCII – Decimal; Decimal -ASCII;
7. HEX - Decimal and Decimal -HEX.
8. Programs to generate delay, Programs using serial port and on-Chip timer/Counter.

Part-II
INTERFACING

9. Write C programs to interface ATmega32 chip to Interfacing modules to develop single chip solutions.
10. Simple Calculator using 6 digit seven segment displays and Hex Keyboard interface to ATmega32.
11. Alphanumeric LCD panel and Hex keypad input interface to ATmega32.
12. External ADC and Temperature control interface toATmega32.
13. Generate different waveforms Sine, Square, Triangular, Ramp etc. using DAC interface to ATmega32; change the frequency andamplitude.
14. Stepper and DC motor control interface to ATmega32.
15. Elevator interface toATmega32.