



# SRI AUROBINDO COLLEGE

(University of Delhi)  
MALVIYA NAGAR, NEW DELHI - 110017  
E-mail : principal@aurobindo.du.ac.in

श्री अरविन्द महाविद्यालय

(दिल्ली विश्वविद्यालय)

मालवीय नगर, नई दिल्ली-110017

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Dated .....

30.12.2015

## NOTICE INVITING QUOTATION

Sealed quotations are invited for purchasing apparatus for Electronics Lab. The list of apparatus is enclosed in Annexure- I. The sealed quotation super scribed "*Quotation for Electronics Department*" should reach the office of **The Principal, Sri Aurobindo College, Malviya Nagar, New Delhi -110017**, within 10 days of publication of the Advertisement.

PRINCIPAL

### **PCB Design Lab**

1. Film Making Unit
2. PCB Drilling Machine
3. UV Exposure Unit
4. Double Sided U.V.Exposure Unit
5. PCB Etching Machine Proto-Etch Etching Machine
6. PCB Curing Machine / PCB Curing machine ( Oven )
7. PCB Shearing Machine
8. Deep Coating Machine
9. Photo Resist DIP Coating Machine
10. Roller Tinning Machine
11. PCB Artwork Table ( Illuminated )
12. Set of Chemicals for above machine
13. PCB Drafting Aids Kit

### **8085 Microprocessor Laboratory**


14. 8085 Microprocessor Kit

### **Embedded System Laboratory**

15. AVR Microcontroller Trainer Kit
16. To interface a simple keyboard and LED with microcontroller.
17. To display different patterns on LEDs using Timers.
18. To interface an LCD with microcontroller.
19. Solid State Relay Interface
20. Interfacing of LCD (2X16).
21. Interfacing of stepper motor and Rotating stepper motor by N steps clockwise/anticlockwise with
22. Generate sine, square, saw tooth, triangular and staircase waveform using DAC interface.
23. Analog to digital conversion using internal ADC and display the result on LCD.
24. Digital to analog conversion using PWM (pulse delay to be implemented using timers).
25. Speed control of DC motor using PWM (pulse delay to be implemented using timers).
26. Serial communication between microcontroller and PC.

### **Semiconductor Devices Laboratory**

27. Study of the I-V Characteristics of the UJT.
28. Study of the I-V Characteristics of the SCR.
29. Study of the I-V Characteristics of JFET.
30. Study of the I-V Characteristics of MOSFET.
31. Study of Characteristics of Solar Cell
32. Study of Hall Effect.
33. To measure the resistivity of semiconductor crystal with temperature by four -probe method.
34. To study the I-V Characteristics of Diac and Triac
35. To study Inverter circuit (SCR based) for different configuration

  
(Dr. Ashwani Kumar)

### **Analog Electronics-I Laboratory**

36. Study of Fixed Bias, Voltage divider and Collector-to-Base bias Feedback configuration for transistors.
37. Colpitts oscillator
38. Hartley oscillator
39. Study of the Phase Shift Oscillator
40. Class A,B and C power amplifier

### **Digital Electronics Laboratory**

41. Design a seven segment display driver.
42. Design a 4 X 1 Multiplexer using gates.
43. Design a counter using D/T/JK Flip-Flop.
44. Design a shift register and study Serial and parallel shifting of data.

### **Analog Electronics-II Laboratory**

45. Design of fixed voltage supply using IC regulator using 78 series and 79 series
46. Module of 555 astable / monostable
47. Module of Integrator/Differentiator
48. LDR module
49. To determine the Characteristics of Thermistors and RTD.
50. LVDT
51. Kelvin's bridge

### **Optics Laboratory**

52. Michelson Interferometer
53. Study of Faradays rotation
54. Study of Electro-optic effect
55. To measure the numerical aperture of an optical fiber.
56. To measure the Planck's constant
57. Magnetic Focussing (e/m)
58. Characteristics of Fiber optic sensor

### **Communication Laboratory**

59. Study of Pulse Code Modulation
60. AM Transmitter/ Receiver
61. TDM, FDM module

### **For Control Systems Laboratory**

62. Synchronous as an error detector
63. Study of P, PI and PID controller.
64. Synchronous transmitter receiver
65. To study position control of DC motor
66. To study time response of first and second order systems
67. To study Frequency response of first and second order systems
68. To study effect of damping factor on performance of second order system
69. To study time response of type 0, 1, and 2 systems
70. To find characteristics of AC servo motor

*Ashwan*  
(Dr. Ashwan (Amma))