

| Sem. | Subject code | Course title | No. of hours | Credits | Paper type |
|------|--------------|----------------|--------------|---------|-----------------|
| VI | 17U6PMP4 | Practical - IV | 3+3 | 6 | Major Practical |

Objectives:

To introduce the students to practical skills in electronic devices and components along with their applications.

Learning outcome:

The students will be able to appreciate practical methods of determining physical quantities, verify laws of physics and be able to develop experimental skills.

**List of Experiments – Electronics
(Any Sixteen only)**

| No. | Experiment (Electronics) |
|-----|--|
| 1 | Half-Adder and Full Adder |
| 2 | Hartley Oscillator |
| 3 | Full-Wave Rectifier with capacitance filter |
| 4 | Transistor Characteristics – CE mode |
| 5 | Phase-shift oscillator |
| 6 | Zener Regulated Power supply (with Bridge Rectifier) |
| 7 | Logic gates using discrete components |
| 8 | IC Regulated power supply |
| 9 | C++ programming – Matrix operation and sorting |
| 10 | Universality of NAND gate |
| 11 | Universality of NOR gate |
| 12 | Op-Amp applications - Adder, Subtractor, Integrator and Differentiator |
| 13 | Monte-carlo simulation (value of pi) using MS-Excel |
| 14 | C++ programming : Curve-fitting by Least squares method |
| 15 | FET characteristics |
| 16 | De-Morgan's theorems |
| 17 | Half-subtractor and Full-subtractor |
| 18 | Microprocessor – 8085 – Simple programs |
| 19 | Single-stage amplifier – discrete components |
| 20 | Astable multivibrator |
| 21 | Bistable multivibrator |
| 22 | Colpitt's oscillator |
| 23 | FET amplifier |
| 24 | UJT Characteristics |
| 25 | UJT Relaxation Oscillator |

Books for Reference

1. A Text Book of Practical Physics by M.N.Srinivasan, S.Balasubramanian, R.Ranganathan-Sultan Chand & Sons, 2007
 2. A Text Book of Practical Physics by Indu Prakash & Ramakrishna – Kitab Mahal Agencies
 3. Practical Physics : S.R. Govinda Rajan, T. Murugaiyan S. Sundara Rajan – Rochouse & Sons
 4. Relevant references from internet
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