

## Patrons:

Prof. S. G. Chitale, Director  
Dr. Prachi Gharpure, Principal  
Dr. Y.S. Rao, Vice-Principal

## Coordinator:

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## Organizing Committee:

1. Prof. Payal Shah
2. Prof. G. T. Haldankar
3. Prof. Manisha Bansode

## Resource persons:

1. Prof. Shikha Srivastava, SAKEC, Chembur
2. Prof. Vidya Joshi, SPCE, Andheri
3. Prof. B. B. Pimple, SPCE, Andheri
4. Dr. Surendra Rathod, SPIT., Andheri
5. Dr. Rajendra Sutar, SPIT., Andheri
6. Prof. Payal Shah, SPIT., Andheri
7. Prof. G. T. Haldankar, SPIT., Andheri

## Course Fees: Rs. 3,000 /-

Registration: Cheque or DD drawn in the name of "SPIT, Allied division" payable at Mumbai should reach on or before 15<sup>th</sup> May, 2015 along with the application form.

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## Contents:

### BEE syllabus:

1. DC circuit
2. AC circuit
3. Transformer
4. Three Phase Circuit
5. Semiconductor Devices

### Electrical Machines:

1. DC Motor
2. Three Phase Induction Motor
3. Single Phase Induction Motor
4. Stepper Motor

### List of experiments:

1. Transformer OC and SC test
2. Load test on transformer
3. Two wattmeter method
4. Speed torque characteristics of DC motor
5. Load test on DC motor (Motor- Generator set)
6. Speed torque characteristics of three phase induction motor (Motor- Generator set)
7. Energy Meter
8. Half Wave and Full Wave Rectifier circuit
9. Common Emitter Characteristics
10. Maximum Power Transfer Theorem
11. Motor control using microcontroller and Raspberry Pi
12. Demonstration of "Space Vector Modulation"



Bharatiya Vidya Bhavan's  
Sardar Patel Institute of Technology

## Announces

One week FDP on

# Basic Electrical, Electronics & Electrical Machines 13<sup>th</sup> July to 17<sup>th</sup> July, 2015

Organized by  
Department of Electronics Engineering,  
Sardar Patel Institute of Technology,  
Munshi Nagar, Andheri (W),  
Mumbai 400 058

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Dr. Y. S. Rao  
Vice Principal

Dr. Prachi Gharpure  
Principal

One week workshop on  
**Basic Electrical, Electronics  
&  
Electrical Machines**  
13<sup>th</sup> July to 17<sup>th</sup> July, 2015

**Name:** \_\_\_\_\_

**Designation:** \_\_\_\_\_

**Qualification:** \_\_\_\_\_

**Experience** \_\_\_\_\_

**Institution:** \_\_\_\_\_

**Address:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Email:** \_\_\_\_\_

**Tel:** (O) \_\_\_\_\_ (Extn.) \_\_\_\_\_

(M) \_\_\_\_\_ (R) \_\_\_\_\_

**Payment by Cash / Cheque / DD:**

**Chq. /DD No:** \_\_\_\_\_ **Dated:** \_\_\_\_\_

**Bank:** \_\_\_\_\_ **Amount Rs:** \_\_\_\_\_

Signature of the participant

### About us

About us Sardar Patel Institute of Technology is under the umbrella of Bharatiya Vidya Bhavan & is academically affiliated to the University of Mumbai. Institute runs four UG, three PG and two Ph.D. programmes. Department of Electronics Engineering has earned a great reputation in the field of engineering education, as well as industry. The department has well equipped laboratories to cater the curriculum. The department regularly organizes value added courses and STTPs. Department is provisionally accredited by National Board of Accreditation.

### About the FDP

The fundamental concepts of Electrical, Electronics and Electrical Machines are the prerequisite for numbers of courses in higher semesters across different programmes. Hence it is necessary for teachers to keep themselves updated with the knowledge in these domains. To boost the confidence while working in these laboratories and handling the equipments it is necessary to have hands-on training on single phase as well as three phase systems. In view of these aspects, faculty members of electronics department is organizing hands on session based FDP for these teachers. Sardar Patel Institute of Technology has spacious laboratory for Basic Electrical, Electronics and Electrical Machines having set up like DC Machines, AC Machines etc. Lab Manual and course handouts will be provided at the time of workshop.

**Teachers from AICTE recognized institutes teaching subjects like Basic Electrical and Electronics, Electrical Machines, Power electronics, Power Electronics and Drives can attend this course.**

### Schedule:

#### Day 1:

10:00 – 12:00 DC Circuit  
12:00- 1:00 : Semiconductor Devices  
1:00- 2:00 Lunch  
2:00 – 3:45: Practical Session on DC circuit  
3:45- 4:00: Tea Break  
4:00-5:00: Practical session on rectifier circuit

#### Day 2:

10:00 – 12:00 AC Circuit  
12:00- 1:00 : Resonance circuit  
1:00- 2:00 Lunch  
2:00 – 3:45: Practical Session on AC circuit  
3:45- 4:00: Tea Break  
4:00-5:00: Practical session on AC circuit

#### Day 3:

10:00 – 12:00 Transformer  
12:00- 1:00 : Transformer  
1:00- 2:00 Lunch  
2:00 – 3:45: Practical Session on AC circuit  
3:45- 4:00: Tea Break  
4:00-5:00: Practical session on Transformer

#### Day 4:

10:00 – 12:00 DC Motor  
12:00- 1:00 : AC Motor  
1:00- 2:00 Lunch  
2:00 – 3:45: Practical Session on DC Motor  
3:45- 4:00: Tea Break  
4:00-5:00: Practical session on AC Motor

#### Day 5:

10:00 – 12:00 Stepper Motor  
12:00- 1:00 : Electric Drives  
1:00- 2:00 Lunch  
2:00 – 3:4: Practical Session on Stepper Motor  
3:45- 4:00: Tea Break  
4:00-5:00: Demonstration on Space Vector Modulation and Raspberry PI

**Venue: BEE Lab, 311, 3<sup>rd</sup> Floor, S.P.I.T. Bhavan's campus, Munshi Nagar, Andheri (W), Mumbai: 400 058**