

# *B B.N.M. Institute of Technology*

Approved by AICTE, Affiliated to VTU, Accredited as grade A Institution by NAAC

All UG branches – CSE, ECE, EEE, ISE & Mech.Engg. accredited by NBA for academic years 2018-19 to 2020-21 & valid upto 30.06.2021

Post box no. 7087, 27th cross, 12th Main, Banashankari II Stage, Bengaluru- 560070, INDIA Ph: 91-80- 26711780/81/82 Email:

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## Department: Electrical & Electronics Engineering

### Innovative Teaching Method

Academic Year 2018-19

Sl. No.	Name of Faculty	Course	Semester	Innovative method	Whether published in website? (Yes/No)
1.	Dr. Priyashree S	Basic Electrical Engineering	1 <sup>st</sup>	Crossword Puzzle	Yes
2.	Dr.S.Sudalai Shanmugam	Transmission and Distribution	4 <sup>th</sup>	i) Showcasing different insulator units in class and demonstrating its physical and electrical property. ii) Presenting videos and pictures of actual field and laboratory measurements.	Yes
3.	Dr.S.Sudalai Shanmugam	High Voltage	7 <sup>th</sup>	i) Showcasing different insulator units in class and demonstrating its physical and electrical property. ii) Presenting videos and pictures of actual field and laboratory measurements.	Yes
4.	Smt. Shubha Rao K	Renewable Energy Sources	5 <sup>th</sup>	Video demonstration on real time application of renewable energy sources- Bio-gas, Solar energy	Yes
5.	Ms.Kruthi Jayaram	Operation and Maintenance of solar Electric system	8 <sup>th</sup>	Collage presentation	Yes
6	Smt. Savitha Sangappanavar	Sensors & Transducers	6 <sup>th</sup>	Demonstration on usage of Data Logger module.	Yes

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Department of Electrical & Electronics Engineering

## **Innovative Teaching Method**

**Title of Innovative method/Activity:** CROSSWORD PUZZLE

**Year:** 2018 - 2019

**Faculty/Inventor:** Smt. Priyashree S

**Designation:** Associate Professor

**Course Name:** Basic Electrical Engineering

### **Goals/Objective of method:**

The students are required to identify the one-word answer from the given clues and encircle the same from the word grid.

### **Description of method (8-10 lines):**

This concept gives an insight for the students about the basic definitions, Law's, and terminologies pertaining to fundamentals of the course Basic Electrical Engineering. The students are required to recollect and write these terms and definitions in order to identify the solution for the given question. The Quiz was evaluated based on the maximum marks scored by each student with a mapping of 1 mark for each question.

### **Benefits of method:**

The course, Basic Electrical Engineering is a foundation course for the Engineering students of all domains. It requires the students to memorize several terms, definitions and Laws'. The quiz has been framed such that the students can adapt to these significant terms, their definitions and fundamental Laws on Electrical Engineering, conveniently. This quiz will provide awareness about the concepts being taught during the regular classes & facilitates as a revision for the internal assessments being conducted periodically during the semester.

For review and critique contact: [priyashrees@bnmit.in](mailto:priyashrees@bnmit.in) [hodeee@bnmit.in](mailto:hodeee@bnmit.in)

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## **Department of Electrical & Electronics Engineering**

### **Innovative Teaching Method – High Voltage Engineering (15EE73)**

#### **Title of Innovative method/Activity:**

1. Introduction to the High Voltage Measurement and Testing Techniques

**Year:** 2018

**Faculty/Inventor:** Dr S Sudalai Shunmugam

**Designation:** Associate Professor

#### **Goals/Objective of method:**

1. To give the introduction about the various testing measurement and testing techniques followed as per national and international standards
2. To share the videos and pictures of the actual field measurement and laboratory testing procedure.

#### **Description of method:**

- A brief introduction of testing standards adopted (IEC and IS)
- To elaborate the difference between type test and routine test
- HVE measurement & testing pictures and videos of on and off-field conditions were shared with the students

#### **Benefits of method:**

- Awareness of testing techniques adopted in the industries.
- A brief introduction about power system component interaction with the immediate environment.

#### **For review and critique contact:**

#### **E-Mail address of faculty and HoD:**

- [sudalai.shunmugam@gmail.com](mailto:sudalai.shunmugam@gmail.com) [hodeee@bnmit.in](mailto:hodeee@bnmit.in)

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## **Department of Electrical & Electronics Engineering**

### **Innovative Teaching Method – Transmission and Distribution**

#### **Title of Innovative method/Activity:**

1. Showcasing different insulator units in class and demonstrating its physical and electrical property.
2. Presenting videos and pictures of actual field and laboratory measurements.

**Year:** 2018

**Faculty/Inventor:** Dr S Sudalai Shunmugam

**Designation:** Associate Professor

#### **Goals/Objective of method:**

1. To demonstrate the different physical property of insulator
2. To explain the design variations in different types of insulator
3. To give the introduction about the selection procedure followed by the utilities for the selection of power system components.

#### **Description of method:**

- Insulators were brought from various industries. The types, construction and working principle of the outdoor insulators were explained in detail to the students as a practical demo.
- Using water spraying technique, the physical property of the different insulator unit is briefed.
- From the rating and dimension, the students are encouraged to find the configuration of insulator assembly.
- Before the start of the each class, first five minutes is used to revise the syllabus covered in the earlier class.

#### **Benefits of method:**

- Creation of technical awareness amongst the students regarding outdoor insulation selection.

#### **For review and critique contact:**

**E-Mail address of faculty and HoD:** [sudalai.shunmugam@gmail.com](mailto:sudalai.shunmugam@gmail.com)

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Department of Electrical & Electronics Engineering

## **Innovative Teaching Method**

**Subject: Renewable Energy Sources**

**Sem: 5<sup>th</sup> EEE (Odd Sem 2018-19)**

**Title of Innovative method/Activity:**

Showcasing the operation, benefits and application of Renewable Energy sources through YouTube videos.

**Year: 2018-19**

**Faculty: Mrs. Shubha Rao K**

**Designation: Associate Professor**

**Goals/Objective of method:**

To make the students understand principle and application of Renewable energy sources(RES)

**Description of method:**

- Various YouTube videos are played in the class to enable the students to analyse its operation and benefits.

**Benefits of method:**

- Creation of technical awareness amongst the students.
- Better understanding of operation of RES

**Effectiveness of method:**

- The method will help the student to understand the design and operation of RES power plant.

**For review and critique contact:**

**E-Mail address of faculty:**

[shubharaok@bnmit.in](mailto:shubharaok@bnmit.in) , [hodeee@bnmit.in](mailto:hodeee@bnmit.in).

Faculty Member

HoD

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Department of Electrical & Electronics Engineering

Innovative Teaching Method

**Title of Innovative method/Activity:** Collage Presentation

**Year:** 2018-2019

**Faculty/Inventor:** Prof. Kruthi Jayaram

**Designation:** Assistant Professor

**Course Name:** Operation and Maintenance of Solar Electric Systems

**Goals/Objective of method:** The main objective of doing such innovative activities is to get a practical understanding of theoretical concepts.

## **Description of method:**

In this subject, there was a case study analysis of different places and topics regarding the operation of solar electric systems. Each case study was divided into different collage presentations. A class of 60 was divided into 8 groups and each group were given with one case study. They presented the case study in the collage format starting from the location, components used, methodology, working principle and market scenario for that particular location.

## **Benefits of method:**

Students were initially finding it difficult to analyze case studies in papers, post the innovative activity they were very comfortable in writing the theoretical concepts of the case study.

For review and critique contact: E-Mail address of faculty and HoD

[kruthijay@gmail.com](mailto:kruthijay@gmail.com), [hodeee@bnmit.in](mailto:hodeee@bnmit.in)

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## Department of Electrical & Electronics Engineering

### Innovative Teaching Method

**Title of Innovative method/Activity:** Demonstration on usage of Data Logger module.

**Year:** 2018-2019

**Faculty/Inventor:** Prof. Savitha Sangappanavar

**Designation:** Assistant Professor

**Course Name:** Sensors & Transducers

**Goals/Objective of method:** The main objective of doing such innovative activities is to get a practical understanding of theoretical concepts.

#### **Description of method:**

Data logging is the process of collecting and storing data over a period of time in order to analyze specific trends or record the data-based events/actions of a system, network or IT environment. The working principle and benefits of wind data logger was explained in the class through Data Logger module.

#### **Benefits of method:**

- Students will be able to understand the systematic collection of wind data at a potential wind farm site.
- Students will have idea how wind farm developers able to estimate the future power output.

For review and critique contact: E-Mail address of faculty and HoD

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