

## Department of Engineering Science

### Innovative Teaching Method - Report

Academic Year –2020-21	Class – FE (Div C)
Semester–II	Date:30/7/2021
CO:CO1,CO2,CO3,CO4,CO5,CO6	PO: PO9, PO10 & PO12

**Title of Innovation method/activity:** **Screen-cast** by using Google Classroom

**1. Name of Faculty:** Mrs. V.P. Harak

**2. Subject :** Basic Electrical Engineering

**3. Objective of Method**

- a. It helps students to clear the concept.
- b. It helps to improve communication skills, self learning & confidence.
- c. To improve the team work.

**4. Topic Covered through Activity**

Topic related to Basic Electrical Engineering subject.

**5. Description of method with Benefit**

Description of method

In this method students are asked to make video on given topic and upload it on YouTube channel.

Benefits of method

- It helps students to improve subject knowledge.

- It helps students to improve communication skills , self-learning and confidence.
- It helps students to understand the concepts and revised the topic.

## 5. Roles and Responsibilities

- **Teacher**
  - Encourage students to prepare video on given topic and upload it on Google Classroom.
  - Provide the study material on Topic .
  - Remain available during the completion of task.
  - Prepare assessment methodology.
- **Student**
  - Go through the concept of the topic.
  - Once topic assigned, understand and discuss individually within the group.
  - Actively participate in group and contribute by means of discussion.
- **Group**
  - Form the group of members as per the guidelines by teachers.
  - Understand and discuss to finalize the best solution for the assigned task.
  - Assign the work within the group to achieve the task within stipulated time period.

## 6. Assessment Tools : Maximum Marks 15

	5	3-4	1-2
<b>Understanding</b>	Excellent	Good	poor
	Clarity of concepts, Confidence, Appropriateness	Clarity of concepts, Confidence,	Clarity of concepts
<b>Visual &amp; audio Quality</b>	5	3-4	1-2
	Excellent	Good	poor

<b>(Presentation)</b>	Good visual quality, Well-rehearsed, smooth delivery in a conversational style, Voice is clear, expressive and enthusiastic	Good visual quality, Well-rehearsed, smooth delivery in a conversational style,	Good visual quality,
	5	3-4	1-2
<b>Use of Technology</b>	Excellent	Good	poor
	Screencast length keeps the audience interested & engaged	Screencast length is adequate	Screencast length is inadequate

### 7. Evaluation sheet of attendee:

**A - Understanding (5)**

**B - Visual & Audio quality (5)**

**C - Use of Technology (5)**

<b>Name of Students</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>Total (15)</b>
PATIL VEDANT SUNIL	4	4	3	11
PATIL YASHWANT UTTAM	3	4	3	10
PAWAR AISHWARYA AVINASH	4	4	4	12
PAWAR SHANTANU SANJAY	4	4	3	11
PAWAR VAISHNAVI S.	4	4	4	12
POTDAR OJASWINI ANIL	4	3	3	10
RANE UMESH VIRENDRA	4	4	4	12
SATHE PRATHAMESH SHASHANK	4	4	3	11
SHEWALE PRANJAL VIJAY	5	4	4	13
SHRIWASTAV SAYALI RATAN	4	4	4	12

SUTRAVE AISHWARYA ARUN	4	4	3	11
TAKANE CHETANA LAXMIKANT	5	4	4	13
TANDALE SIDDHI MUKESH	4	4	4	12
THOMBARE GEETA KISHOR	5	4	4	13
UPHADE ABHISHEK SUNIL	4	4	4	12
VAISHNAV PRAGATI SANDIP	5	4	4	13
VISPUTE PRAJWAL KISHORE	4	4	3	11
PATIL HARSHALI JITENDRA	4	4	4	12
PATIL YASHWARDHAN PRAMOD	5	4	4	13
RAJOLE OM ANIL	4	4	4	12
RANDHIR PRANJAL SHASHIKANT	5	4	4	13
SALUNKE JANAVHI PRAKASH	4	4	4	12
SANGLE SAKSHI GORAKSHNATH	4	4	3	11
SINGH ARJUN MAHY PAL	4	4	3	11
SONAWANE ABHISHEK SHRIRAM	5	4	4	13
SURYAWANSHI ANIKET RAJESH	4	4	3	11
WAGH RUSHIKESH MADAN	4	3	3	10
SHAIKH SAJID YUSUF	5	4	4	13
YUVRAJ PAGAR	4	4	4	12

## 8. Impact Analysis

Sr. No.	3-High/Excellent	2-Moderate /Average	1-Slight/Poor
1. Did you understand and cover the objective of the activity?	86.20%	13.79%	-
2. Do you find that methodology is helpful to cover the content from the syllabus?	82.75%	13.79%	3.44%
3. Does this help you increase your knowledge of the topic?	89.65%	10.34%	-
4. Did you want us to conduct such activity again ?	68.96%	27.58%	3.44%
5. Do you feel PO9 is achieved?	89.65%	10.34%	-
6. Do you feel PO10 is achieved?	82.75%	17.24%	-
7. Do you feel PO12 is achieved?	86.20%	13.79%	-

## 9. Activity Video Links:

[https://youtu.be/j4L4\\_nvwaZI](https://youtu.be/j4L4_nvwaZI)


<https://youtu.be/xIpEUuy67Vo>

[https://youtu.be/beoP\\_fxSffM](https://youtu.be/beoP_fxSffM)

## 10. Activity Video Screenshots:


## ● Battery rating

- 1) Ampere hour capacity:  
battery capacity =  $I_d \cdot T_d$  (Ampere-hour)
- 2) Reserve capacity:  
the capacity is given as number of minutes a battery will tolerate a 25 drain without dropping below 10.5V higher the rating better the battery
- 3) Zero cranking power :
- 4) Cold cranking power:

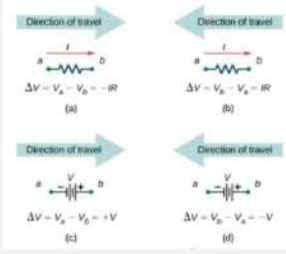


<https://classroom.google.com/g/tg/MzQzMjk5NDIxMjg3/MzczNjk4MDUwMTUy#u=MjY2NDA0Nzc4NzQy&t=f>

### PROCEDURE FOR LOOP ANALYSIS



- Determine the number of common nodes and reference node within the network.
- Assign current and its direction to each distinct branch of the nodes in the network
- Apply KCL at each of the common nodes in the network
- Solve the resulting simultaneous linear equation for the node voltage
- Determine the currents through and voltages across each elements in the network



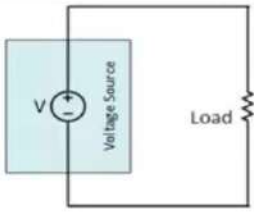
(a)  $\Delta V = V_a - V_b - IR$

(b)  $\Delta V = V_b - V_a - IR$

(c)  $\Delta V = V_a - V_b = +V$

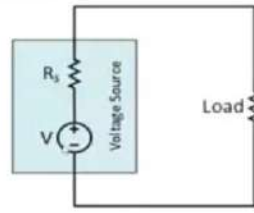
(d)  $\Delta V = V_b - V_a = -V$

<https://classroom.google.com/c/MzQzMjk5NDIxMjg3/a/MzczNjk4MDUwMTUy/submissions/by-status/and-sort-name/done>



**Ideal Voltage Source**

- No source internal resistance
- Provide constant current/voltage



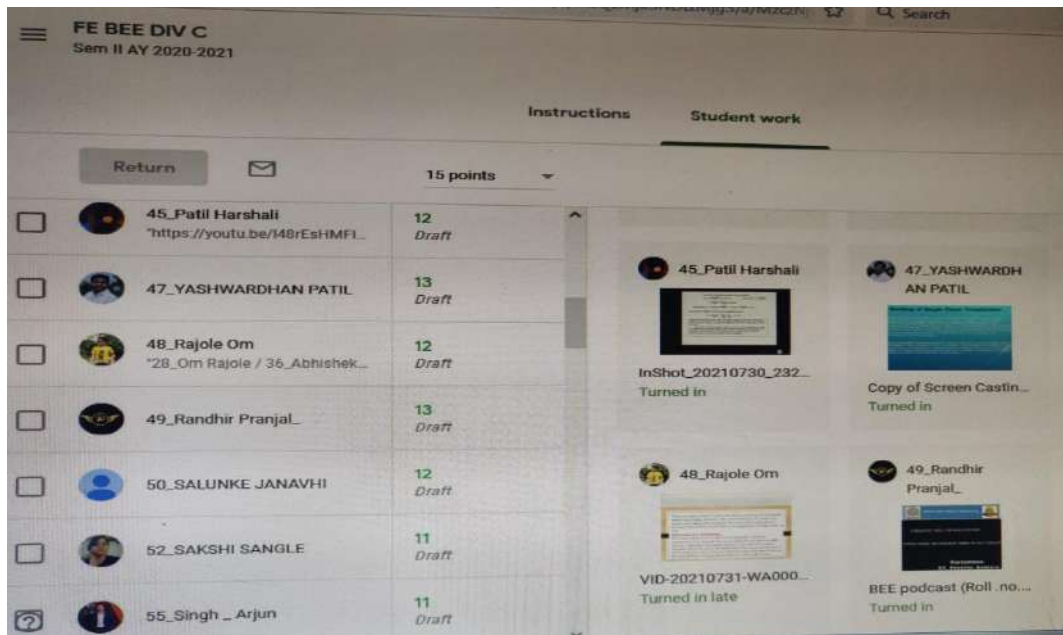
**Practical Voltage Source**

- Source internal resistance
- Provide variable current/voltage

<https://classroom.google.com/g/tg/MzQzMjk5NDIxMjg3/MzczNjk4MDUwMTUy#u=MjY2NDA0Nzc4NzQy&t=f>

- Based on how the windings are wound around the central steel laminated core, the transformer construction is divided into two types
- **Core-type Transformer**
- In this type of construction, only half of the windings are wound cylindrically around each leg of a transformer to enhance magnetic coupling as shown in the figure below. This type of construction ensures that magnetic lines of force flow across both the windings simultaneously. The main disadvantage of the core-type transformer is the leakage flux that occurs due to the flow of a small proportion of magnetic lines of force outside the core.

<https://classroom.google.com/g/tg/MzQzMjk5NDIxMjg3/MzczNjk4MDUwMTUy#u=Mjc3OTc1MjYyMTg3&t=f>



11. For review and critique contact: e-mail address of faculty and HOD

[harak.vaishali@kbtcoe.org](mailto:harak.vaishali@kbtcoe.org) , [hod.enggsci@kbtcoe.org](mailto:hod.enggsci@kbtcoe.org)

*Harak*

Mrs. V.P. Harak  
Subject Incharge

*P. V. Joshi*

Mr. P. V. Joshi  
Module Coordinator

*Nerkar*

Ms. J. J. Nerkar  
HOD