



GOVERNMENT POLYTECHNIC COLLEGE, UJJAIN (M.P.)

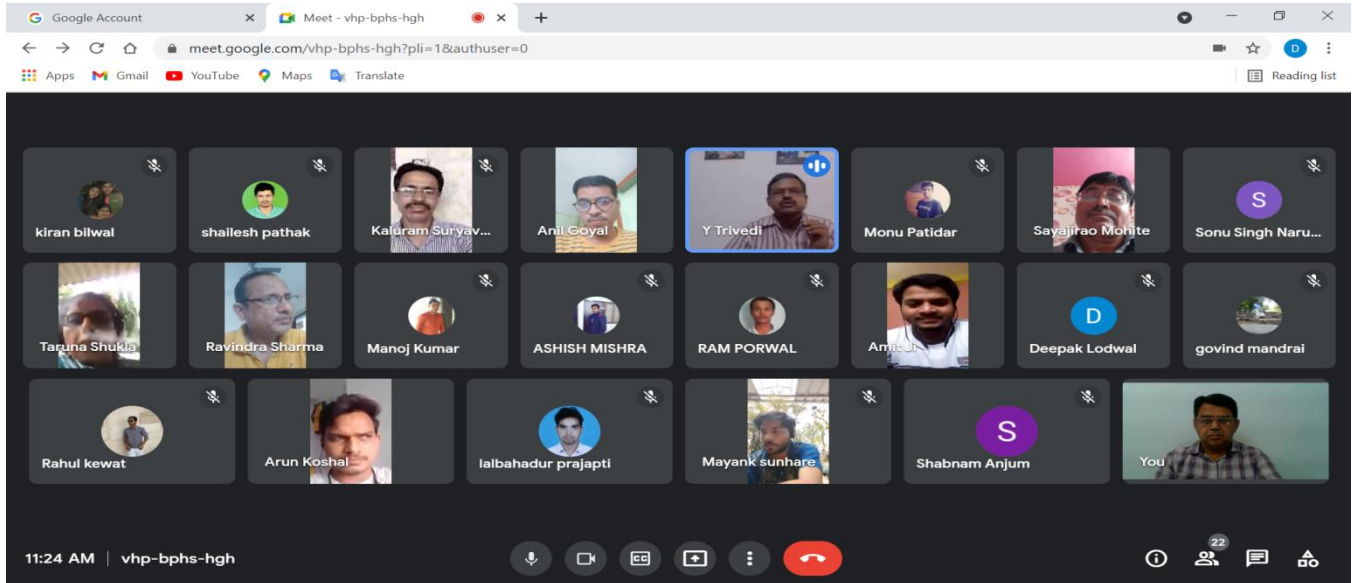
A Govt. Institute established in 1955 | Approved by AICTE, New Delhi | Affiliated to RGPV,
Bhopal | NBA Accredited Institute

UPC // UJJAIN // NEWSLETTER // JAN- JUNE 2020

Department of Electrical Engineering

Department goes online

The COVID-19 crisis the institute decides to response, the department on the front foot embraces various online platforms like Moodle , Google-meet, Zoom and Web-ex etc to continue the online classes without any interruption. The students have shown all positive spirits and responded enthusiastically.

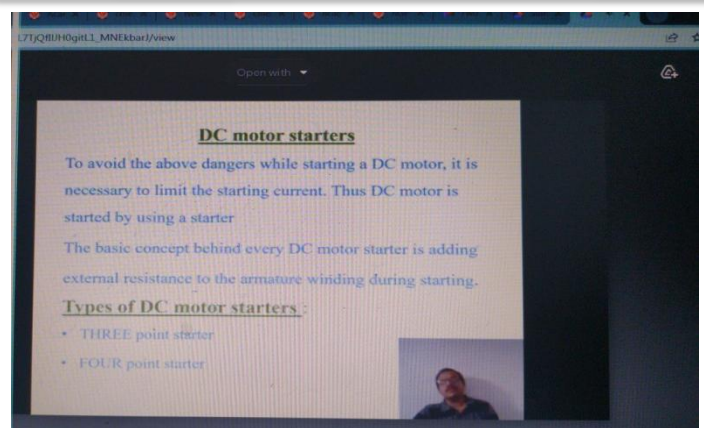


Online Classes

In Pandemic situation, we provide the regular online classes without any interruption. The students have shown all positive spirits and responded enthusiastically. The online lecture done by Google Meet, Zoom etc other Platform.



Mr. Yogesh Trivedi conduct the following lecture on UEP for 5th Sem Students



2

Mr. V.K. Gupta conduct the following lecture on Instrumentation for 5th Sem Students

An alternating current VOLTAGE E is applied across plates P1 and P2 and the difference of the voltages across the two capacitances is measured.

Voltage across C_1 is $E_1 = EC_2 / C_1 + C_2$
 And voltage across C_2 is $E_2 = EC_1 / C_1 + C_2$

When the movable plate is midway between the two fixed plates $C_1 = C_2$ and therefore and therefore $E_1 = E_2 = E/2$

\therefore Differential output when the movable plate is midway $\Delta E = E_1 - E_2 = 0$.
 Let the movable plate be moved up due to displacement x . Therefore the values C_1 and C_2 become different resulting in a differential voltage output.

Now $C_1 = \epsilon A/d-x$ and $C_2 = \epsilon A/d+x$

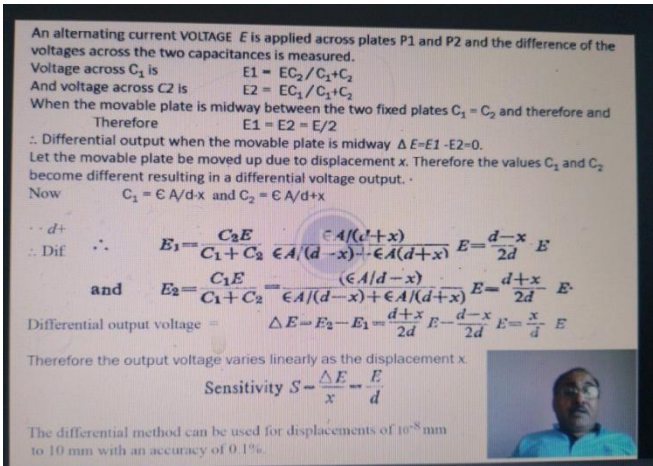
\therefore Dif $E_1 = \frac{C_2 E}{C_1 + C_2} = \frac{\epsilon A(d+x)}{\epsilon A(d-x) + \epsilon A(d+x)} E = \frac{d-x}{2d} E$
 and $E_2 = \frac{C_1 E}{C_1 + C_2} = \frac{\epsilon A(d-x)}{\epsilon A(d-x) + \epsilon A(d+x)} E = \frac{d+x}{2d} E$

Differential output voltage = $\Delta E = E_2 - E_1 = \frac{d+x}{2d} E - \frac{d-x}{2d} E = \frac{x}{d} E$

Therefore the output voltage varies linearly as the displacement x .

Sensitivity $S = \frac{\Delta E}{x} = \frac{E}{d}$

The differential method can be used for displacements of 10^{-5} mm to 10 mm with an accuracy of 0.1%.



3

Mrs. Taruna Shukla conduct the following lecture on Power system for 5th Sem Students

Power system operation and protection – Unit 2 ABCD Constant

ABCD constants of medium Transmission line (PI Network)
 $Z = R + jX$

Equations of PI network are

$$-V_s = \left(1 + \frac{YZ}{2}\right) V_r + ZI_r$$

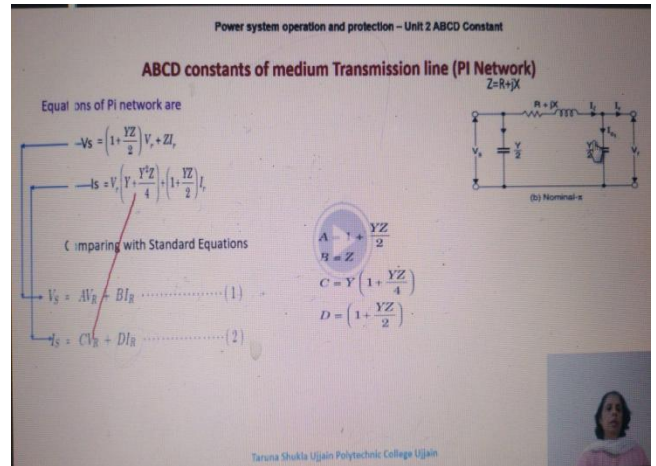
$$-I_s = V_r \left[Y + \frac{YZ^2}{4} \right] + \left(1 + \frac{YZ}{2}\right) I_r$$

(Comparing with Standard Equations)

$$A = 1 + \frac{YZ}{2}$$

$$B = Z \left(1 + \frac{YZ}{4}\right)$$

$$C = Y \left(1 + \frac{YZ}{4}\right)$$

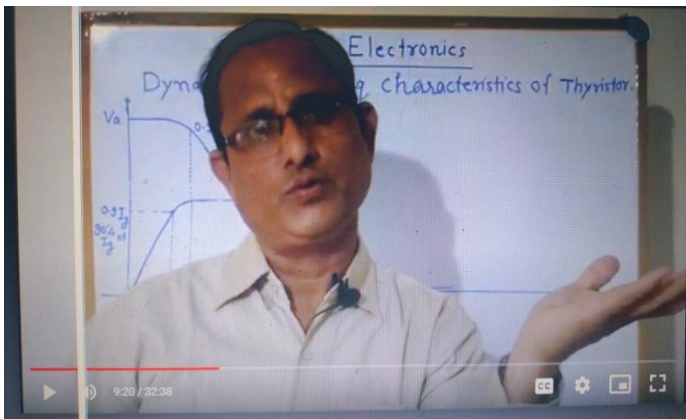
$$D = \left(1 + \frac{YZ}{2}\right)$$


4

Mr. Ravindra Sharma conduct the following lecture on Power Electronics for 5th Sem Students

Electronics

Dynamic Characteristics of Thyristor



5

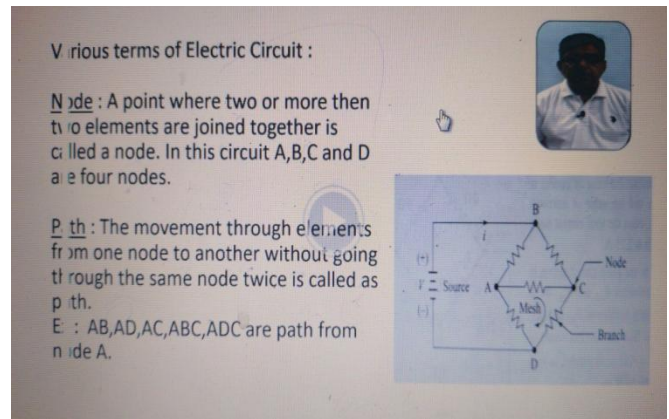
Mr. Deepak Lodwal conduct the following lecture on Electric Circuit for 3rd Sem Students

Various terms of Electric Circuit :

Note : A point where two or more than two elements are joined together is called a node. In this circuit A, B, C and D are four nodes.

Path : The movement through elements from one node to another without going through the same node twice is called as path.

E : AB, AD, AC, BC, ADC are path from node A.

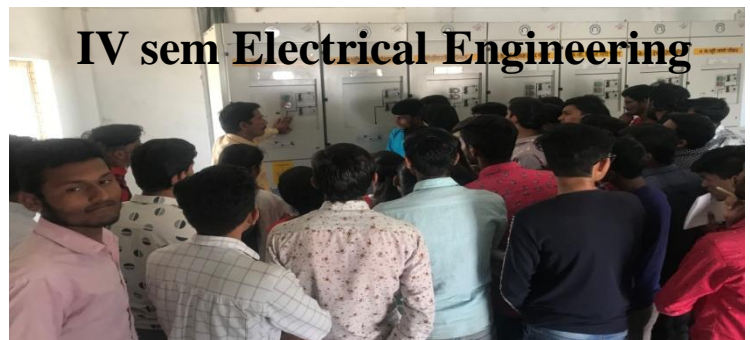


Visit to 33KV substation at Nagjiri Ujjain Date :27/2/2020



Before Pandemic situation, there were an industrial visit for “ MPEB 33KV substation at Nagjiri Ujjain for 2020 batch of Electrical Engineering Department .This visit was carried out under the major activity head of “technical /Research skill and sub-activity head of industrial visit.

IV sem Electrical Engineering



Expert lecture

Date :29/2/2020

1

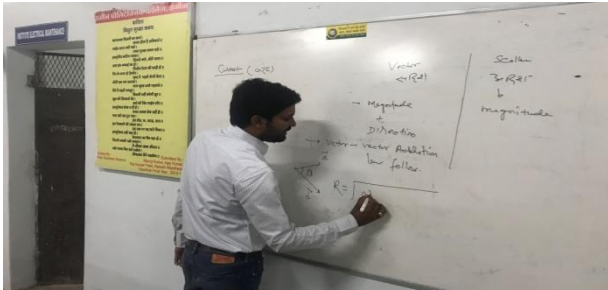
Expert lecture on non conventional sources of energy with focus on Wind power and career prospects in wind energy by Rizwan Nagori Assistant Manager IL&FS Power services Limited Indore



Date :2/3/2020

2

Expert Lecture on Bridging the gap between Theory and practical concepts in Power System Engineering by S.K.Yadav Assistant Engineer High Voltage Maintenance MPEB Ujjain



Other Departmental News

Date :6/3/2020

Career counselling for girls students by John deere

