

## Department of Electrical and Electronics Engineering

Academic Year: 2020-2021

Semester: VI

Batch:2018-2022

Subject Code: EE18601

Subject Name: Power System Operation and Control

### 1. Google drive link: ICT Based Tools

For the topic, Analysis of load frequency control of single area system, a problem on the determination of steady state frequency deviation is solved using Microsoft paint tool through online Google Class Room.

Google drive link:

[https://drive.google.com/file/d/1nuxXjO6UTt6mFLS-PPXsxKTM4JJZt\\_Jq/view?usp=drive\\_link](https://drive.google.com/file/d/1nuxXjO6UTt6mFLS-PPXsxKTM4JJZt_Jq/view?usp=drive_link)

The screenshot shows a Microsoft Paint application window with the following handwritten calculations:

$$B = \frac{\partial P_D}{\partial f} = \frac{100 \cdot 750}{100 \cdot 50} = \frac{15 \text{ MW/Hz}}{1500} = 0.01 \text{ pu MW/Hz}$$
$$R = \frac{3}{100} \cdot \frac{f}{P_r} \text{ Hz/MW} = 0.001 \text{ Hz/MW} \times 1500 = 15 \text{ #/pu MW}$$
$$\beta = B + \frac{1}{R} = 0.68 \text{ pu MW/Hz}$$
$$\Delta f_s = \frac{-M}{\beta} = \frac{-(30/1500)}{0.68} = -0.0294 \text{ Hz}$$

On the right side of the screenshot, a video call interface is visible, showing a profile picture of a man and the name "VENKATESAN C EEE".