# Mohamed Sathak AJ College of engineering

**Department of Electronics and Communication Engineering**
**Innovative Teaching Methods**

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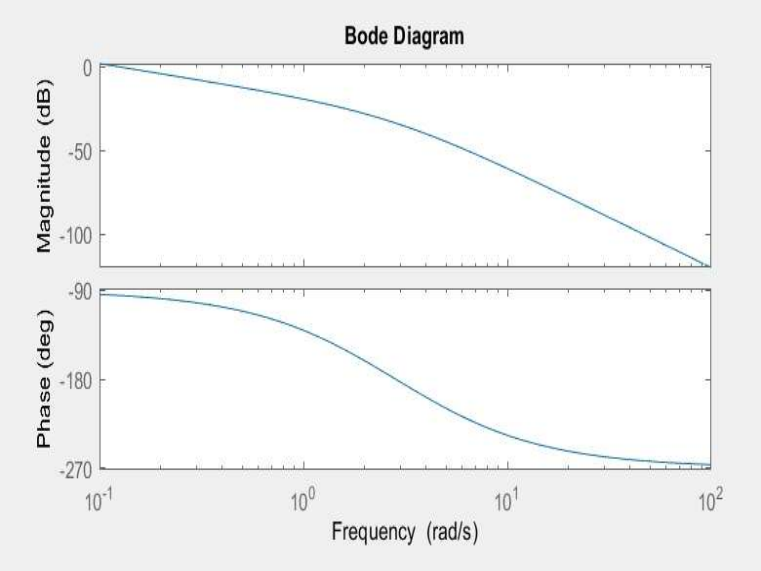
| Activity Title | Group Project-Simulation |
| Faculty Name/Department | Mr.N.Suresh / EEE |
| Mapped Course Name & Code | EC 3351 Control Systems |
| Date | 28/10/2023 |
| Benefitted Students (Year / Sem / Dept) | II/III/ECE |
| Topic | Frequency Response Analysis |
| Description | Projects are given to students to enhance their design and development skills.<br>Frequency Response Analysis of the system is given to students as group projects. They carry out the analysis using simulation platform (MATLAB). |
| Course Outcomes (CO) | CO3: The student will be able to illustrate the frequency response characteristics of open loop and closed loop system response |
| Performance Indicator (PI) | 1.4.1 |
| Mail ID ( for review) | eee.suresh@msajce-edu.in |
| Activity Photos |  |

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**Topics/ Questions:**

1. Frequency response analysis by bode plot for the transfer function 1
2. Frequency response analysis by bode plot for the transfer function 2
3. Frequency response analysis by bode plot for the transfer function 3
4. Frequency response analysis by bode plot for the transfer function 4
5. Frequency response analysis by bode plot for the transfer function 5
6. Frequency response analysis by bode plot for the transfer function 6
7. Frequency response analysis by bode plot for the transfer function 7

**Marks:**

| Group Name | Reg No. | Topic | Marks | | |
|---|---|---|---|---|---|
| | | | Theoretical Calculation (10) | Simulation (10) | Total (20) |
| A | Reg No 1-5 | Frequency response analysis by bode plot for the transfer function 1 | 10 | 9 | 18 |
| B | Reg No 6-10 | Frequency response analysis by bode plot for the transfer function 2 | 10 | 9 | 19 |
| C | Reg No 11-15 | Frequency response analysis by bode plot for the transfer function 3 | 10 | 10 | 20 |
| D | Reg No 16-20 | Frequency response analysis by bode plot for the transfer function 4 | 10 | 9 | 19 |
| E | Reg No 21-26 | Frequency response analysis by bode plot for the transfer | 10 | 10 | 20 |

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|---|---|---|---|---|---|
| | | function 5 | | | |
| F | Reg No 27, 28,30, 31,32,33 | Frequency response analysis by bode plot for the transfer function 6 | 10 | 9 | 19 |
| G | Reg No.34, 35,36, Shahul Hameed, Dinesh K N. Karthikeyan S | Frequency response analysis by bode plot for the transfer function 7 | 10 | 9 | 19 |

Outcome:

The student will be able to illustrate the frequency response characteristics of open loop and closed loop system response