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###### **M.Sc. PROGRESS / FINAL SEMINAR REQUEST FORM**

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| **Student’s Name** | | MUHAMMAD SHAMAAS | | | | |
| **Registration Number** | | 2018-MS-EE-4 | | **Specialization** | | POWER |
| **Supervisor’s Name** | | Dr. MUHAMMAD ASGHAR SAQIB | | **Status** | | Full Time |
| **Proposed Date & Time for this Seminar:** | | | 13 JULY 2020 | | | |
| **Submission of presentation is mandatory on week before the date of your final seminar. Have you submitted it?** | | | | | YES | |
| **Thesis Title:** | MODELING AND SIMULATION OF MAGNETIC TRANSMISSION LINES | | | | | |
| **Seminar Abstract:**  Magnetic Transmission Line is the dual counterpart of Electric Transmission Line. Its theory encompasses a diverse range of applications including Transformers, Dynamic Machines, Microwave Generators, Tuners, Couplers, Isolators and Power Dividers. Intrinsically, Magnetic Transmission Line is made from a non-conducting magnetic material, with a high permeability. It transmits Magnetic Flux as the effective Magnetic charge. Time varying magnetic flux results in a Magnetic Displacement Current inside the Transmission Line. This produces a gradient Magnetic Field; with Fields Lines that spread radially outwards. The magnetic displacement current and magnetic voltage due to this Magnetic Field is measured in Volts and Amperes respectively. Although, the operation of a Magnetic Transmission Line does not involve electric charges, Magnetic Displacement Current produces an Electric Field with closed Field Lines encircling the Magnetic Transmission Line. Together, the Electric and Magnetic Fields transmit Energy along the direction of propagation. These relations were modeled using Maxwell’s Equations and magnetic circuits to study the time and frequency domain behavior of Magnetic Transmission Lines. Furthermore, Finite Difference Time Domain Electromagnetic Field Simulations were carried out in MEEP Simulator for dispersive, inhomogeneous, non-linear Magnetic Transmission Lines. | | | | | | |
| **Supervisor’s Signature:** | | | | | **Dated:** | |

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| **Date Received:** | **Seminar Date:** | **Seminar Time:** |
| **Received by:** | **Check:** | **Seminar Venue:** |
| **Director Postgraduate Studies:** | | |

###### **M.SC. SEMINAR REPORT FORM**

**M.Sc. Thesis Committee**

Supervisor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_

Member: 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Thesis Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Student’s Name: - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Registration No. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**COMMENTS**

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Student is advised to implemented suggestion/direction according to the comments of thesis committee members.

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| **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **Committee Member** | **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **Supervisor** | **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **Director Postgraduate** |

###### **M.SC. SEMINAR REPORT FORM**

**M.Sc. Thesis Committee**

Supervisor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_

Member: 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Thesis Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Student’s Name: - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Registration No. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **Committee Member** | **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **Supervisor** | **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **Director Postgraduate** |

###### **Ph.D SEMINAR REPORT FORM**

**Ph.D Thesis Committee**

Supervisor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_

Member: 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Thesis Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Student’s Name: - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Registration No. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **Committee Member** | **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **Supervisor** | **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **Director Postgraduate** |