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**Department of Electrical Engineering**

**Indian Institute of Science, Bangalore**

**Important information to the research applicants called for interview**

Dear Research Applicant,

This page is relevant to you only if you had applied for admission to Ph.D. or M.Tech (Res) and have been invited for an interview at the Department of Electrical Engineering, IISc in the fourth week of May 2023.

Based on your your academic record, you have been invited to appear for a rigorous, technical interview online. For the final selection, your performance in the interview will be decisive. Please note the following information towards preparation for interview:

1. **Interview Structure**: At the time of interview, you will choose one of the following two interview committees (irrespective of specialization in BE/B-Tech or ME/M-Tech):

**Committee I**: For students wishing to pursue research in one of the broad areas of Power Electronics, High Voltage Engineering & Power Apparatus OR Power Systems.

**Committee II**: For students, who wish to pursue research in one of the broad areas of Signal Processing, Image Processing, Control Systems, Computer Vision, Pattern Recognition OR Machine Learning.

In addition, you will be asked to indicate preferences for the subject areas (within the chosen committee) in which you wish to pursue research. ***See the* choice form *for more information*.** If selected, you may be asked to work in any one of the areas indicated by you at the time of interview. It is advised that you visit http://www.ee.iisc.ac.in/research.php, to know more about the research pursued in the department.

1. **Number of positions:**  There are about 13 positions, which may get enhanced depending on the performance. Scholarship will be awarded as per the existing norms.
2. **What to Read:** The interview is intended to test understanding of relevant subjects that you would have studied in BE/B-Tech and/or ME/M-Tech degree, with emphasis on the chosen area of research.
* In **committee I**, you will be asked questions in two to three of the following topics: Network Theory, Electronic Circuits, Power Electronics, High Voltage Engineering, Power Apparatus, Power Systems, Machines, Signals & Systems, Control Systems, etc.
* In **committee II**, the topics will be Signal Processing, Image Processing, Computer Vision, Pattern Recognition, Machine Learning, Programming and Data Structures, Signals & Systems, Control Systems, etc.

In addition, you will be interviewed in one or two of the maths subjects, to be chosen from the following, depending upon your educational background and/or the intended area of research: Linear algebra, Calculus, Differential equations, Probability, Numerical techniques, etc.

1. **Our Expectation**: Essentially, we seek those candidates, who possess the innate ability to think and logically address a question; not merely answer from memory.
2. **Direct Ph.D. Program**: We can admit applicants with only a BE/B-Tech degree also for Ph.D directly, if their performance in the interview is exceptionally good. In the attached form, you can indicate whether you would like to be considered for the direct Ph.D. program. This is not relevant for applicants with a Masters degree.
3. **External Research Program Applicants**: In addition to the above, you need to give a very brief (a few minutes) presentation to the committee on your proposed area of research work.

We trust that this provides the required minimal information you need to prepare for the interview. Once you reach the department, you will have to fill up the **Research Interview - Choice of likely research area** and submit it to the EE office.

With our very best wishes,

Chairman, Department of Electrical Engineering