

## JEST – 2004

### JOINT ENTRANCE SCREENING TEST – 2004

For Ph.D. Programmes in Physics/Mathematics/Theoretical Computer Science

Applications are invited from motivated students, with consistently good academic record, for enrolment to a Ph.D. Programme in **Physics** (including Theoretical and Observational Astronomy, Astrophysics, Biological Physics, Plasma Physics and Technology, Atmospheric and Space Sciences, Condensed Matter Physics and Materials Science)/**Mathematics/Theoretical Computer Science**, at any of the following institutes:

- Harish-Chandra Research Institute (HRI), Allahabad, for Theoretical Physics, Mathematics and Astrophysics.
- Indian Institute of Astrophysics (IIA), Bangalore, for Astronomy and Astrophysics (with thrust on Observational Astronomy), Physics (Astronomical Instrumentation, Optics, Nonaccelerator Particle Physics and Atomic Physics).
- Indian Institute of Geomagnetism (IIG), Mumbai, for Geomagnetism, Atmospheric and Space Sciences, Plasma Physics.
- The Institute of Mathematical Sciences (IMSc), Chennai, for Theoretical Physics, Mathematics and Theoretical Computer Science.
- Institute of Physics (IOP), Bhubaneswar, for Physics (Condensed Matter, Atomic, Nuclear and Particle Physics) and Accelerator-based Research.
- Institute for Plasma Research (IPR), Gandhinagar, for Physics (Experimental and Theoretical).
- Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune, for Physics, Astronomy and Astrophysics.
- Inter-University Consortium for DAE Facilities (IUC-DAEF), Indore, for Physics (Experimental Condensed Matter and Synchrotron Radiation).
- Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bangalore, for Experimental and Theoretical Condensed Matter Physics, Statistical Mechanics and Materials Science.
- National Centre for Radio Astrophysics (NCRA), Tata Institute of Fundamental Research, Pune, for Physics, Astronomy and Astrophysics.
- Physical Research Laboratory (PRL), Ahmedabad, for Physics (Experimental and Theoretical, Atmospheric and Space Sciences, Nonlinear Dynamics, Computational Physics), Astronomy and Astrophysics and Planetary Sciences & Geosciences.
- Raman Research Institute (RRI), Bangalore, for Astronomy and Astrophysics, Optics, Soft Condensed Matter Physics (Liquid Crystals, Biological Physics), Theoretical Physics.
- S. N. Bose National Centre for Basic Sciences (SNBNCBS), Kolkata, for Physics and Mathematics. For Doctoral Research Programme in Mathematics, applications are to be made to SNBNCBS directly.
- State Observatory (SO), Nainital, for Astronomy and Astrophysics.

#### Minimum Qualifications and Selection Procedures

**For Physics:** M.Sc. in Physics or M.Sc./M.E./M.Tech. in related disciplines. Candidates with M.Sc. in Mathematics will also be considered at IIA and IIG. At IPR, Masters degree in Physics/Engineering Physics/Applied Physics, etc. is necessary. Graduates with a B.E. or B.Tech. will also be considered at IIA, IUCAA, NCRA, JNCASR, RRI and IMSc.

**For Mathematics:** M.Sc. in Mathematics or M.Sc./M.E./M.Tech. in related disciplines. Candidates with strong bachelor's degree will also be considered.

**For Theoretical Computer Science:** M.Sc./M.E./M.Tech. OR B.Sc./B.E./B.Tech degree in Computer Science or related disciplines, and should be interested in the mathematical aspects of computer science.

**At IMSc:** Exceptionally talented graduates with B.Sc./B.E./B.Tech. degree will also be considered for admission to the M.Sc. (by Research) programme in Mathematics/Theoretical Computer Science/Physics, as part of an integrated Ph.D. programme in these disciplines. B.Sc. graduates will also be considered for the Integrated Ph.D. programme at SNBNCBS.

*In all disciplines, students who expect to complete their final examination by August 2004 are also eligible to apply.*

**Details about the various Institutes, their Ph.D. and related programmes and the minimum requirements are given in the booklet, which will be mailed with the application form.**

Candidates applying for Ph.D. Programmes in Physics/Theoretical Computer Science will have to appear for the JEST (written exam.) at any one of the following centres: Ahmedabad, Allahabad, Bangalore, Bhopal, Bhubaneswar, Chandigarh, Chennai, Delhi, Goa, Guwahati, Hyderabad, Indore, Jaipur, Kanpur, Kharagpur, Kochi, Kolkata, Madurai, Mumbai, Nagpur, Nainital, Patna, Pune, Raipur, Roorkee, Shillong, Silchar, Vishakhapatnam and Udaipur.

Using the JEST results each institute will call a limited number of candidates for its further selection procedure depending on its requirements. Travelling allowance will be provided to candidates called for interviews.

Admission for the Ph.D. Programmes in Mathematics at IMSc/HRI will be on the basis of an At-Home Examination, for which the question paper will be sent along with the application form. Subsequently, separate interviews will be held at IM.Sc./HRI.

*All selected candidates will receive Research Fellowship from the respective Institutions.*

#### How to apply

N.B.: There are separate application forms for Physics, Mathematics and Theoretical Computer Science.

**For Physics**, application forms can be obtained by writing to: The Coordinator, JEST-2004, Institute for Plasma Research, Bhat, Gandhinagar 382 428, along with a self-addressed slip (approximate size 20 cm × 15 cm) with postage stamp for Rs 60 affixed on slip itself. (This will be used to mail the application forms to you). **Alternatively**, for Physics Stream the application forms can be downloaded from <http://www.ipr.res.in/> but the filled application form has to be sent back **by post** to us (The Coordinator, JEST-2004, Institute for Plasma Research, Bhat, Gandhinagar 382 428. DO NOT SEND BY E-MAIL).

**For Mathematics at HRI/IMSc**, application forms can be obtained by writing to: The Registrar, Harish-Chandra Research Institute (HRI), Chhatnag Road, Jhansi, Allahabad 211 019, along with a self-addressed standard size envelope (size 19 cm × 27 cm or larger) affixed with postage stamp for Rs 25. Instead, they can also be downloaded from <http://www.mri.ernet.in/>. The mathematics application forms will be mailed out in early December 2003. The on-line version will be available after 10 December 2003.

**For Theoretical Computer Science at IMSc**, applications can be obtained by writing to: The Registrar, The Institute of Mathematical Sciences (IMSc), CIT Campus, Chennai 600 113, along with a self-addressed envelope (size 25 cm × 30 cm) affixed with postage stamp for Rs 15. They can also be downloaded from <http://www.imsc.res.in>

The above information is also available at: <http://www.ipr.res.in>, <http://www.mri.ernet.in>, <http://www.imsc.res.in>

#### Important Dates:

- For Physics/Theoretical Computer Science, request for application forms should reach by 30 November 2003 and completed application forms should reach by 15 December 2003.
- For Mathematics, the deadline for receipt of completed application forms is 15 January 2004.
- The JEST for Physics and Theoretical Computer Science will be held on Sunday, 15 February 2004.