



JEST-2006

Joint Entrance Screening Test-2006

For Ph.D. Programmes in Physics/Theoretical Computer Science
(From this year, HRI and IMSc will follow a different procedure for admission to
Ph.D. Programmes in Mathematics*.)

Applications are invited from motivated students, with consistently good academic record, for enrolment in a Ph.D. Programme in **Physics** (including various interdisciplinary research areas in Physics)/**Theoretical Computer Science**, at any of the following institutes:

- Aryabhata Research Institute of Observational Sciences (**ARIES**), Nainital, for Astronomy, Astrophysics and Atmospheric Physics
- Indian Institute of Astrophysics (**IIA**), Bangalore, for Astronomy, Astrophysics, Astronomical Instrumentation and Optics, Atomic Physics and Non-linear Optics Experiments
- Inter-University Centre for Astronomy and Astrophysics (**IUCAA**), Pune, for Physics, Astronomy and Astrophysics
- 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 Astronomy and Astrophysics
- Physical Research Laboratory (**PRL**), Ahmedabad, for Physics (Experimental and Theoretical, Complex Systems, Non-linear Dynamics, Quantum Optics and Quantum Information, Astronomy, Astrophysics and Solar Physics), Space and Atmospheric Sciences, Planetary Sciences and Geosciences
- Raman Research Institute (**RRI**), Bangalore, for Astronomy and Astrophysics, Optics, Soft Condensed Matter Physics (Liquid Crystals, Physics in Biology), Theoretical Physics
- S. N. Bose National Centre for Basic Sciences (**SNBNCBS**), Kolkata, for **Physical Sciences** and Homi Bhabha National Institute (**HBNI**, a deemed university) Mumbai, for DGFS fellowships and the following affiliated institutes of HBNI:
- Bhabha Atomic Research Centre (**BARC**), Mumbai, for Condensed Matter Physics, Crystallography, Nuclear Physics, Accelerator Physics, Reactor Physics, Atomic and Molecular Physics, Nanoscience, High Pressure Physics, Seismology, Laser and Plasma Physics, Mass Spectroscopy and Computational Physics
- Centre for Advanced Technology (**CAT**), Indore, for Lasers and their Applications, Laser Plasma Interaction, Cold Atom Physics, Condensed Matter Physics (Superconductivity and Magnetism, Crystals and Thin Films), Nanomaterials and Applications, Nonlinear and Ultrafast Optical Studies, Beam Physics and Free Electron Laser
- Harish-Chandra Research Institute (**HRI**), Allahabad, for Theoretical Physics and Astrophysics
- Indra Gandhi Centre for Atomic Research (**IGCAR**), Kalpakkam, for Theoretical and Experimental Condensed Matter Physics, Materials Science and Reactor Physics
- 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)
- Saha Institute of Nuclear Physics (**SINP**), Kolkata, for Biophysical Sciences, Condensed Matter Physics (Theory and Experiments), Nuclear Physics (Theory and Experiments), High Energy Physics (Theory, Astroparticle Physics and Experiments), Quantum Gravity and String Theory, Mathematical Physics, Materials Science (Surface Science and Plasma Physics)
- The Institute of Mathematical Sciences (**IMSc**), Chennai, for Theoretical Physics and Theoretical Computer Science
- Variable Energy Cyclotron Centre (**VECC**), Kolkata, for Accelerator Physics, Condensed Matter Physics, Nuclear Physics (Experiments and Theory), Relativistic Heavy Ion Collisions (Experiments, Theory, QCD and QGP), Physics of Neutrinos (Experiments)

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. Graduates with a B.E. or B.Tech. will also be considered at IIA, IUCAA, NCRA, JNCASR, RRI, SNBNCBS and IMSc. At IPR candidates should have a Masters degree in Physics, Engineering Physics, Applied Physics, etc. with at least 55% aggregate.

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

Special Programmes

- **At HRI**, candidates with a Bachelor's degree will also be considered for the Integrated M. Sc. – Ph.D. programme in Physics.
- **At IMSc**, graduates with B.Sc./B.E./B.Tech. degree will also be considered for admission to the M.Sc. (by Research) programme in Theoretical Computer Science/Physics, as part of an integrated Ph.D. programme in these disciplines.
- **At SNBNCBS**, talented graduates with B.E./B.Tech. degree will be considered for the Integrated M.Sc.-Ph. D. programme in Physical Sciences.

In all disciplines, students who expect to complete their final examination by August 2006 are also eligible to apply.

Candidates seeking admission to any of the above institutes for a Ph.D. Programme in Physics or Theoretical Computer Science may appear for the JEST (written examination in Physics or Theoretical Computer Science as applicable) at any of the following centres: Ahmedabad, Aligarh, Allahabad, Bangalore, Bhopal, Bhubaneswar, Chandigarh, Chennai, Delhi, Goa, Guwahati, Hyderabad, Indore, Jaipur, Kanpur, Kharagpur, Kochi, Kolkata, Madurai, Mumbai, Nagpur, Nainital, Patna, Pune, Raipur, Roorkee, Silchar, Thiruvananthapuram, Visakhapatnam and Udaipur.

Mere qualifying in JEST does not entitle one to get a Research Fellowship. Using the JEST results, each institute will call a limited number of candidates for its further selection procedure depending on its requirements.

All selected candidates will receive Research Fellowship from the respective institutes.

How to apply

Candidates for Physics/Theoretical Computer Science can apply ON-LINE for JEST-2006 by visiting the web site <http://www.jncasr.ac.in/jest>.

Although ON-LINE application is preferred, those who have difficulty in accessing internet may submit OFF-LINE (printed) application forms as follows:

For Physics as well as Theoretical Computer Science, Application forms can be obtained by writing to: **The Coordinator, JEST-2006, Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Indian Institute of Science Campus, C.V. Raman Avenue, Bangalore 560 012**, along with a self-addressed slip (Approximate size 20 cm × 15 cm) with postage stamp for Rs 60/- affixed on the slip itself. (This will be used to mail the application form). The filled application form should be sent back by **Registered Post, A.D.** to the above address.

E-MAIL APPLICATIONS AND XEROX COPIES OF PRINTED APPLICATIONS WILL NOT BE ACCEPTED.

***For Mathematics at HRI/IMSc**, the candidates need not send in any application. However, they must apply for the Research Awards of the National Board for Higher Mathematics (**NBHM**) and appear for that screening test. For details visit <http://www.imsc.res.in> or www.mri.ernet.in.

The above information is also available at <http://www.jncasr.ac.in/jest>. Details about the on-going programmes at different institutions are available at the JNCASR web site with appropriate hyperlinks.

Important Dates

- On-line submission of applications will be enabled at <http://www.jncasr.ac.in/jest> from **10 November 2005**.
- Request for printed application forms should reach JNCASR by **9 December 2005**.
- Last date for receipt of the filled applications, and for ON-LINE submission of applications, is **2 January 2006**.
- **JEST will be held on 19 February 2006 (Sunday)**.