## Joint Entrance Screening Test - 2022

### For Ph.D. Programmes in

Physics/Theoretical Computer Science/Computational Biology / Neuroscience

Sunday March 13, 2022, from 10.00 a.m. to 1.00 p.m.

### Test Centres

Ahmedabad, Allahabad, Aligarh, Amritsar, Bengaluru, Bardhaman, Bhubaneswar, Bhopal, Chandigarh, Chennai, Delhi, Goa, Guwahati, Indore, Hyderabad, Jaipur, Kanpur, Kharagpur, Kolkata, Kochi, Madurai, Mangalore, Mumbai, Nainital, Nagpur, Patna, Pune, Raipur, Roorkee, Sambalpur, Silchar, Siliguri, Srinagar, Thiruvananthapuram, Udaipur, and Visakhapatnam Apply online through https://www.jest.org.in from December 13, 2021 to January 18, 2022.

The Science & Engineering Research Board (SERB) (statutory body established through an Act of Parliament) recognized JEST as a National Eligibility Test sponsored programmes/projects vide their Office Memo No. SB/S9/Z-01/201S. Qualifying in JEST does not entitle an applicant to get a Research Fellowship. Using the JEST results, each institute will call a limited number of candidates for further selection depending on their requirements.



Aryabhatta Research Institute of Observational Sciences, Nainital Astronomy and Astrophysics, Atmospheric Physics.



Bose Institute, Kolkata Atmospheric Sciences, Biophysics, Complex systems and networks, Condensed matter physics and materials science, High energy Physics and Astroparticle physics, Quantum physics and Quantum information, Nuclear and radiation physics.



Indian Institute of Astrophysics, Bengaluru

Astronomy & Astrophysics, Astronomical Instrumentation. Atomic physics.



Research, Bhopal

Indian Institute of Science Education and

Condensed matter physics (Theory and

Biophysics, Laser plasma interactions,

physics (Theory, phenomenology,

Jawaharlal Nehru Centre

Experimental & Theoretical

condensed matter physics,

for Advanced Scientific

Research, Bengaluru

Biophysics, Advanced

electron microscopy,

Statistical mechanics

Materials science & Soft

Experiment) Soft matter physics (Theory),

Ultrafast physics (Experiments), Astrophysics and Cosmology, High energy

experiment), Nonlinear optics, Atomic &

Molecular physics (Theory & Experiment).

Experimental: Magnetism,

Indian Institute of Science Education

and Research, Thiruvananthapuram

Nanoscale plasmonics, Ultrafast

spectroscopy, Nonlinear optics;

Superconductivity, Nanoscience, Photonics, Semiconductor Physics, Surface sciences,

Theory: Cosmology, Quantum information,

Statistical physics, Condensed matter,

String theory & Nonlinear dynamics.

International Centre for Theoretical Sciences, TIFR-Bengaluru

Astrophysical Relativity, Data Assimilation & **Dvnamical Systems** Statistical Physics & Turbulence, String Theory.



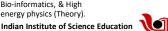
### Inter-University Centre for Astronomy and Astrophysics, Pune

All areas of Astronomy & Astrophysics including Ground and Space-based Instrumentation and Observations. Solar physics, Extragalactic astronomy, High energy astrophysics, Gravitational waves, Theoretical and Computational astrophysics, Large-scale structure, Gravitation and Cosmology.

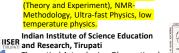


### Indian Institute of Science, Bengaluru

Condensed matter physics (Experiments & Theory), Astronomy & Astrophysics (Theory), Atomic & Molecular physics (Experimental), Bio-crystallography & Bio-informatics, & High energy physics (Theory).



and Research, Mohali Quantum Information (Experiment and heory), Complex systems & Networks, Theoretical Astrophysics & Cosmology, Particle Physics and Field Theory, Statistical physics, Quantum thermodynamics, Condensed Matter (Theory and Experiment), NMR-Methodology, Ultra-fast Physics, low



Theoretical Astrophysics, Observational Astronomy, Experimental and Theoretical Condensed Matter Physics, Experimental and Theoretical Soft Matter Physics, Nonlinear dynamics and complex networks, Experimental High Energy Physics, Atomic and Molecular Physics, Non equilibrium statistical Physics and active matter, Raman Research Institute, Bengaluru Optics and Opto-electronics. Astronomy & Astrophysics, Light & Matter Physics, Soft Condensed Matter

### **Physical Research** Laboratory, Ahmedabad

Theoretical physics, Astronomy & Astrophysics, Solar physics. Space & Atmospheric sciences, Planetary science, Geophysics, Atomic & molecular physics & Optical physics.

### **Indian Institute of Science Education** and Research, Berhampur Condensed matter physics (Theory and

Experiment), Electronic Materials & Devices, High energy physics (Theory, Phenomenology, Experiment), Nuclear Structure, Photonics, Quantum Theory, Quantum Information.

# Indian Institute of Science

**Education and Research, Pune** Condensed matter physics, Computational material science Nanotechnology Atomic Physics & Quantum Optics, Nonlinear dynamics. Astrophysics, Particle physics and Field theory, Solar & Plasma physics, Quantum information processing, Soft matter.



### S.N. Bose National Centre for Basic Sciences, Kolkata Astrophysics & Cosmology

Chemical & Biological physics, Condensed matter physics & material science, High energy physics and Quantum field theory, Mathematical physics, Nanosciences, Quantum optics & quantum information, Statistical physics, Complex system.

nd Theoretical Physics. Radio & X-ray

Astronomy, Signal Processing, Imaging

Materials & Active Systems, Physics in

Biology, Classical and Quantum Gravity,

and Instrumentation Ultrafast

phenomena, Liquid Crystals, Soft

Statistical Physics and Stochastic

### Tata Institute of tifr Fundamental Research, TO Mumbai

Condensed matter physics & material science, High energy physics, Nuclear & Atomic physics, Theoretical physics.

### condensed matter. TIFR-H

Astronomy & Astrophysics,

## connectomics.

Sciences, TIFR-Hyderabad Condensed matter physics & materials science of nonequilibrium. Soft & living matter, Fluid dynamics. Intense laser-matter interactions, Computational physics, Statistical physics, NMR of Biophysical & other systems.

TIFR Centre for Interdisciplinary

## Indian Institute of Science Education and

Research, Kolkata Condensed matter physics, Field Theory, Classical & Quantum Gravity, Cosmology, Solar Science, High Energy Physics, Nonlinear Dynamics, Statistical Physics, Soft Matter, Optics & Spectroscopy, Atomic physics, Biophotonics, Spintronics, Nanoscience, NMR, Quantum Information, Biological Physics and Complex Systems, Molecular Physics and



Technology, Thiruvananthapuram Astronomy & Astrophysics, Atmospheric sciences, Applied & Adaptive optics, Atomic and Molecular physics, Condensed matter physics, Nanotechnology, NMR of materials and other systems, Nonlinear dynamics, Photonics, Quantum information and Statistical Physics.



### **National Brain Research** Centre, Gurgaon

Molecular, Systems, Computational, Cognitive & Translational Neurosciences Neurocomputing,

Neuroinformatics, Neuroimaging, Neurophysiology and Functional

### **UGC-DAE Consortium for Scientific** Research, Indore Condensed Matter Physics; thin films;

National Centre for

Radio Astrophysics,

Astronomy &

Astrophysics.

TIFR-Pune

electron, optical, X-ray spectroscopies; scanning probe microscopies: Positron annihilation: Raman & Mössbauer spectroscopy; XMCD & spectroscopy with synchrotron; Neutron diffraction: Experimental Nuclear Physics: γ-ray Spectroscopy and heavy ion reaction.



### Constituent Institutes of Homi Bhabha National Institute Mumbai A Deemed University



Theoretical physics and Astrophysics.

**National Institute of Science** 

Experimental and theoretical

energy physics, string theory,

non-linear and quantum optics, quantum information.

experimental and theoretical high

condensed matter physics,

cosmology & astrophysics,

Education and Research,

Bhubaneswar



### Indira Gandhi Centre for Atomic Research, Kalpakkam

Solid state phase transformations. Superconductivity, Structure & dynamics of soft condensed matter, Computational materials science Accelerator-based irradiation induced phenomena, Low dimensional systems. Physics of interfaces. Nanomaterials, Thin films technology & Theoretical physics.



Lasers & their applications, Laser plasma interaction, Cold atom physics, Condensed matter physics. Superconductivity & magnetism, Crystals & Thin Films, Nanomaterials & applications, Non-linear & Ultrafast Optical studies, Beam physics and Free electron laser.

### The Institute of Mathematical Sciences, Chennai Theoretical Physics,

Theoretical Computer Science & Computational Biology.

### Institute of Physics, Bhubaneswar Physics (Condensed

matter. Nuclear and High energy physics) & Accelerator-based research



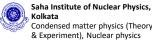
### Institute for Plasma Research. Gandhinagar

Fundamental and applied Plasma Physics Research involving theory & experiments on magnetic confinement fusion plasma, complex/dusty plasma, industrial plasma applications including plasma material processing; laser produced plasma, laser plasma interaction, radio-frequency plasma applications etc.



#### Variable Energy Cyclotron Centre, Kolkata

Accelerator physics, Condensed matter physics & materials science, Nuclear physics (Experiment and Theory), Relativistic heavy ion collisions & QCD Phase transition (Experiment and Theory).



(Theory & Experiment), High energy physics (Theory & Experiment), Relativistic heavy ion collisions & QCD phase transition (Theory & Experiment), Astroparticle physics, Cosmology, Quantum gravity, String theory, Mathematical physics, Surface science & Plasma physics.

### **Eligibility Criteria**

M.Sc, Integrated Ph.D.: B.Sc. in physics/mathematics; Regular Ph.D.: M.Sc in physics/ applied-physics;

B.Tech./B.E./M.E./M.Tech./4 year B.S./M.C.A. may also be considered for M.Sc and Ph.D (integrated and regular) programmes in some institutes. Please check the websites of individual institutions for further details. Students in the final year of these courses are also eligible to appear for JEST 2022. Application through email or by post will not be accepted.

Application Fee: Rs. 800/- (Rs. 400/- for Female and SC/ST candidates). For further information please visit JEST website: https://www.jest.org.in