

“ज्ञान, विज्ञान आणि सुसंस्कार यांचाचही शिक्षण प्रसार” – शिवानंदजी अ. बापूजी साबुळे

Shri Swami Vivekanand Shikshan Sanstha, Kolhapur.



VIVEKANAND COLLEGE, KOLHAPUR (Autonomous)

Affiliated to Shivaji University

NAAC Reaccredited "A" | College with Potential for excellence | ISO 9001 : 2015



By

Mr. A.N. Gore (Assit. Prof.)

DEPARTMENT OF PHYSICS

Avenues after B.Sc. Physics

DATE : 08/12/2021



Study Options after B.Sc. Graduation

- ❖ **Post graduation in the subjects/ courses offered by Science (eg. Phy, Chem, Maths, Zoo, Botany, etc.,)**
- ❖ **Non-science master degree programmes like journalism, animation, computer technology, management, hospitality sector etc.,**

Top academic programmes after B.Sc. Graduation

- ❖ M.Sc. / Master of Science
- ❖ MBA / Master of Business
- ❖ MCA / Master of Computer Application
- ❖ B.Ed. / Bachelor of Education
- ❖ Technical short term courses (SAP, JAVA, SQL, .NET, financial accounting, PGDM)





Employment Opportunities after B.Sc. Graduation

- Health Care Providers
- Space Research Institutes
- Agriculture Industry
- Pharmaceuticals and Biotechnology Industry
- Oil Industry
- Testing Laboratories
- Research Firms
- Forensic Crime Research
- Forest Services
- Educational Institutes
- Industrial Laboratories
- Wastewater Plants
- Wildlife and Fishery Departments
- Aquariums
- Seed and Nursery Companies
- Hospitals
- Environmental Management and Conservation
- Biotechnology Firms
- Food Institutes
- Chemical Industry
- Geological Survey Departments

What after, having a graduation in
Physics

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Career Scope After BSc Physics

- Research Firms
- Space Research Institutes
- Geological Survey Departments
- Meteorological Survey Departments
- Scientific Assistant
- Consulting Physicist
- Technician
- Industrial Laboratories
- Educational Institutes
- Agricultural Research services
- RTO Department
- Hospitals
- Power Generating Companies
- Pyrotechnics Manufactures

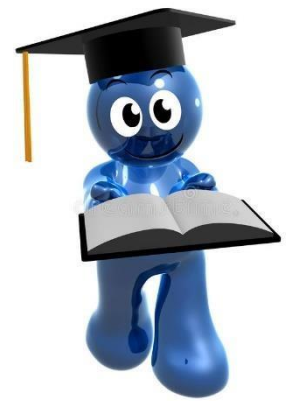
Career Option After BSc Physics – Private Sectors

- TCS – Tata Consultancy Services
- Analog Devices
- GE Digital
- Atomic Labs
- Solar Industries India Ltd
- Infosys,
- Wipro
- Automobile Industry

Overseas


- NASA
- Tesla





Post-graduation Courses After BSc Physics

- Acoustical Physics
- Astrophysics
- Astronomy
- Biophysics
- Fiber Optical Physics
- Fluid Physics
- Geophysics
- Optical Physics
- Plasma Physics
- Materials Physics
- Medical/Health Physics
- Molecular Physics
- Nuclear and Particle Physics
- Space Science
- Theoretical Physics
- Solid State Physics
- Atmospheric Physics



For those who seek to take admission in IIT for
M.Sc.

IIT JAM

<http://jam.iitb.ac.in/>



Exam Name	Full Form	Courses Offered
IIT JAM	Joint Admission Test	<ul style="list-style-type: none">➤ MSc Physics➤ Joint MSc-PhD in Physics➤ MSc-PhD Dual Degree in Physics➤ MSc Applied Geophysics➤ MSc Astronomy➤ Joint MSc- PhD in Atmosphere and Ocean Sciences➤ Joint MSc-PhD in Geophysics
		<ul style="list-style-type: none">➤ MSc-PhD Dual Degree in Environmental Science and Engineering➤ MSc (Tech) in Applied Geophysics




Admission for PhD

JEST: <https://www.jest.org.in/>

Following are the Institutes, where one can take admission through merit

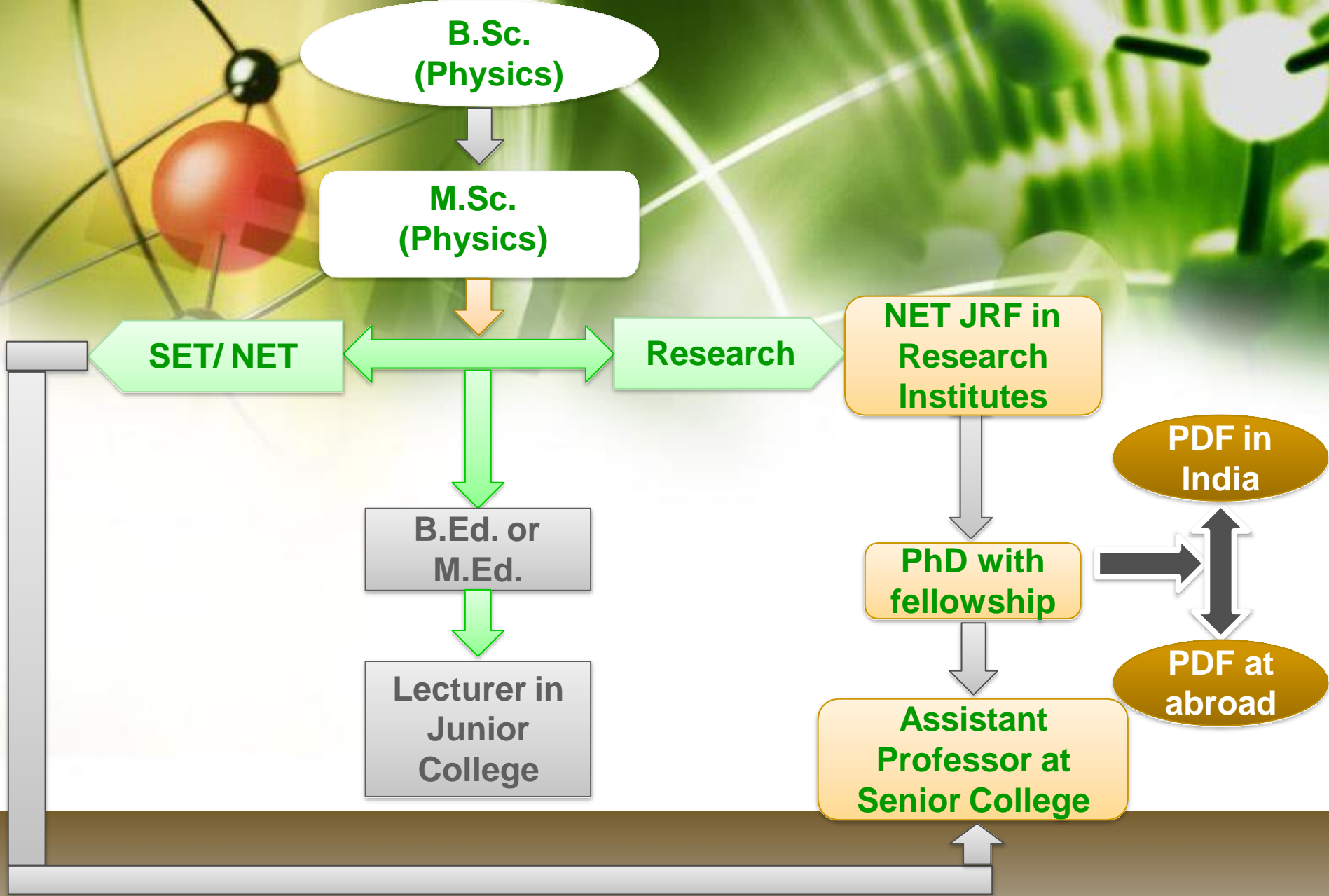
- ❖ *Aryabhata Research Institute of Observational Sciences, Nainital: Astronomy and Astrophysics, and Atmospheric Physics*
- ❖ *Bose Institute, Kolkata*
- ❖ *Homi Bhabha National Institute, Mumbai*
- ❖ *Harish-Chandra Research Institute, Allahabad: Theoretical Physics, Astrophysics*
- ❖ *International centre for theoretical sciences, Bangalore*
- ❖ *Indira Gandhi Centre for Atomic Research, Kalpakkam*
- ❖ *Indian Institute of Astrophysics, Bangalore*
- ❖ *Indian Institute of Science, Bangalore*
- ❖ *IISER, Bhopal*
- ❖ *IISER, Kolkata*
- ❖ *IISER, Pune*
- ❖ *Etc., about 23 institutes in India*



Exam Name	Full Form	Courses Offered
JEST	Joint Entrance Screening Test	<ul style="list-style-type: none"><li data-bbox="1151 615 1619 719">➤ PhD Programme in Physics<li data-bbox="1151 719 1644 936">➤ Integrated MSc-PhD Programme<li data-bbox="1151 936 1532 1051">➤ Integrated PhD Programme<li data-bbox="1151 1051 1619 1162">➤ MSc Programme in Physics



Exam Name	Full Form	Courses Offered
TIFR GS	Tata Institute of Fundamental Research	<input type="checkbox"/> PhD Programme in Physics <input type="checkbox"/> Integrated MSc-PhD Programme
IISER	Indian Institute of Science Education and Research	<input checked="" type="checkbox"/> Integrated BS-MS in Physics <input checked="" type="checkbox"/> Integrated PhD Programme <input checked="" type="checkbox"/> PhD Programme in Physical Science



SET- State Eligibility Test; **NET**- National Eligibility Test; **JRF**- Junior Research Fellowship
PDF- Post Doctoral Fellowship

The scope after Masters Degree in Physics

One can find various opportunities in governmental organization like IoP, DRDO, BARC, VSSC, ISRO, SSPL, SAC, RRI, IIGM, IIA, IISc, IISER etc.,

Job Types

Lab Supervisor
Researcher
Technician
Teacher
Scientist
Consulting Physicist
Research Associate
Senior Physicist
Assistant Scientist
Radiation
Oncologist
Radiologist
Professor

Government Jobs after M.Sc. or Ph.D. in Physics

Jobs in scientific Research and Development organizations such as

1. **Indian Space Research Organization (ISRO)**
2. **The Defense Research and Development Organization (DRDO),**
3. **Physics Research Laboratory (PRL) Ahmedabad,**
4. **Shah Institute of Nuclear Physics Kolkata and Nuclear science center New Delhi.**
5. **Oil and Natural Gas Corporation (ONGC)**
6. **Bharat Heavy Electricals Limited (BHEL)**
7. **National Thermal Power Corporation (NTPC)**

Institutes in Maharashtra

1. **Bhabha Atomic Research Centre (BARC)**
2. **Indian Institute of Tropical Meteorology (IITM)**
3. **Indian Meteorological Department (IMD)**
4. **Indian Institute of Geomagnetism (IIG), Navi Mumbai**
5. **Indian Institute of Science Education and Research (IISER), Pune**
6. **Giant Meterwave Radio Telescope (GMRT), Pune**
7. **Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune**
8. **National Chemical Laboratory (NCL), Pune**
9. **Centre for Materials for Electronics Technology (C-MET), Pune**
10. **Armament Research and Development Establishment (ARDE), Pune**
11. **Defence Research and Development Organisation (DRDO), Pune**

Union Public Service Commission such as

IPS

IAS



Career Options after M.Sc. Physics

- Online tutor,
- College lecturer,
- Assistant Professor,
- Observation Scientist,
- Laboratory Technician,
- School Science Technician or Research Analyst,
- Physics Training Manager,
- Assistant Scientist,
- Software Engineer,
- Network Administrator,
- IT Consultant,
- Security Expert,
- Java Developer,
- Systems Support Administrator,
- Interface Engineer etc.



**After Graduation or Post Graduation in
Physics or any Science stream**



**Competitive Exams (MPSC, IBPS,
UPSC)**