



Yearly Status Report - 2017-2018

Part A

Data of the Institution

1. Name of the Institution		TATA INSTITUTE OF FUNDAMENTAL RESEARCH
Name of the head of the Institution		Prof. Sandip Trivedi
Designation		Director
Does the Institution function from own campus		Yes
Phone no/Alternate Phone no.		02222782306
Mobile no.		9892105000
Registered Email		iqac@tifr.res.in
Alternate Email		director@tifr.res.in
Address		1, Dr. Homi Bhabha Road, Navy Nagar, Colaba,
City/Town		Mumbai
State/UT		Maharashtra
Pincode		400005

2. Institutional Status	
University	Deemed
Type of Institution	Co-education
Location	Urban
Financial Status	central
Name of the IQAC co-ordinator/Director	Prof. Amol Dighe
Phone no/Alternate Phone no.	02222782432
Mobile no.	9967396593
Registered Email	iqac@tifr.res.in
Alternate Email	deangs@tifr.res.in

3. Website Address	
Web-link of the AQAR: (Previous Academic Year)	_https://www.tifr.res.in/NAAC/TIFR-AQAR-16-17.pdf
4. Whether Academic Calendar prepared during the year	Yes
if yes,whether it is uploaded in the institutional website: Weblink :	https://www.tifr.res.in/~sbp/new2015/Academic_Calendar_2017.pdf

5. Accrediation Details

Cycle	Grade	CGPA	Year of Accrediation	Validity	
				Period From	Period To
1	A+	3.68	2016	02-Dec-2016	01-Dec-2021

6. Date of Establishment of IQAC	15-Feb-2016
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7. Internal Quality Assurance System

Quality initiatives by IQAC during the year for promoting quality culture		
Item /Title of the quality initiative by IQAC	Date & Duration	Number of participants/ beneficiaries
Course on Scientific	02-Jul-2018	105

Writing

4

[View File](#)

8. Provide the list of Special Status conferred by Central/ State Government-UGC/CSIR/DST/DBT/ICMR/TEQIP/World Bank/CPE of UGC etc.

Institution/Department/Faculty	Scheme	Funding Agency	Year of award with duration	Amount
No Data Entered/Not Applicable!!!				
No Files Uploaded !!!				

9. Whether composition of IQAC as per latest NAAC guidelines:

Yes

Upload latest notification of formation of IQAC

[View File](#)

10. Number of IQAC meetings held during the year :

1

The minutes of IQAC meeting and compliances to the decisions have been uploaded on the institutional website

Yes

Upload the minutes of meeting and action taken report

[View File](#)

11. Whether IQAC received funding from any of the funding agency to support its activities during the year?

No

12. Significant contributions made by IQAC during the current year(maximum five bullets)

TIFR participated for the first time in NIRF 2018. The ranking agency created a "Special Category", in which TIFR was placed along with ICAR, IARI, and JNCASR

TIFR received the status of "Category-I Deemed to be University" from UGC in June 2018

A course on Scientific Writing was conducted on the main campus in July 2018 for the first-year students.

A special lecture room in the main campus was equipped with the facility of lecture-recording, videoconferencing, and lecture-streaming.

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13. Plan of action chalked out by the IQAC in the beginning of the academic year towards Quality Enhancement and outcome achieved by the end of the academic year

Plan of Action	Achivements/Outcomes
To get TIFR enrolled in National Academic Depository (NAD)	Process towards the signing of the SLA agreement is in progress.
To get one lecture room furbished with the facilities like lecture-recording, videoconferencing, and live-streaming.	In the Colaba campus, a lecture room has been equipped with the facility of lecture-recording, videoconferencing, and live-streaming.
To start a course on Scientific Writing for graduate students across the subjects.	A course on Scientific Writing was conducted in the Main Campus in July 2018 for the 1st year students. This was conducted in collaboration with Cactus Communications
To apply for the status of Catagory-I Deemed to be University status from UGC	Successfully completed the process. TIFR received the status of "Category-I Deemed to be University" from UGC in June 2018.
To apply for the Institution of Eminence status	The evaluation committee recommended that TIFR, along with a few other institutions, be declared as an outstanding sectoral institution. (The final decision on this is still pending with the UGC/MHRD.)
To start participating in the NIRF scheme for Indian University ranking.	Completed the formalities on time. The ranking agency created a "Special Category", in which TIFR was placed.
No Files Uploaded !!!	

14. Whether AQAR was placed before statutory body ?	Yes
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Name of Statutory Body	Meeting Date
Institute Academic Council	30-Sep-2020

15. Whether NAAC/or any other accredited body(s) visited IQAC or interacted with it to assess the functioning ?	No
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16. Whether institutional data submitted to AISHE:	Yes
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Year of Submission	2018
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Date of Submission	17-Apr-2018
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17. Does the Institution have Management Information System ?	Yes
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If yes, give a brief descripton and a list of modules currently operational (maximum 500 words)	Datanet is the panTIFR Management Information Systems, which is TIFR's
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Integrated Information System (TIIS) for accounting, budgeting, procurement, material receipts, and inventory. Another module MANCH is used for sharing the minutes of the meeting and wider consultation among the faculty members. Additionally, individual centers have developed independent local modules to cater to their needs. [NCRA] PACTS Module at NCRA has been modified to include the online APAR tracking for all staff members. [ICTS:] ICTS One account: It is an LDAP based user account. LDAP is the Lightweight Directory Access Protocol that includes Intranet, Internet through mac address registration (at ICTS), HPC cluster access, Private cloud storage, Gitlab Access, Eduroam wireless, VPN (Virtual private network), etc. eSSL eTime eTracklite Server (Attendance software) This software is used to manage the attendance of the employees through biometric/ RFID ID card. Online Application Portal for Long Term Visiting Students Program (LTVSP) Faculty Recruitment, PDF Archive Page. [TIFRH:] TIFRHyderabad has created a Dashboard for Academics: An integrated module on Dashboard for course registration, Feedback, Grading, Teaching related information Guest User Management (Aruba GPP): An interface to create Guest Internet/WiFi accounts with validity. Datanet LDAP MANCH PACTS

Part B

CRITERION I – CURRICULAR ASPECTS

1.1 – Curriculum Design and Development

1.1.1 – Programmes for which syllabus revision was carried out during the Academic year

Name of Programme	Programme Code	Programme Specialization	Date of Revision
PhD or DPhil	PhD-Biol	Biology	01/08/2017
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1.1.2 – Programmes/ courses focussed on employability/ entrepreneurship/ skill development during the Academic year

Programme with Code	Programme Specialization	Date of Introduction	Course with Code	Date of Introduction
Nill	Nill	Nill	Teaching practice and school internship/ design of learning	01/08/2017

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1.2 – Academic Flexibility

1.2.1 – New programmes/courses introduced during the Academic year

Programme/Course	Programme Specialization	Dates of Introduction
PhD or DPhil	Biology	01/08/2017

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1.2.2 – Programmes in which Choice Based Credit System (CBCS)/Elective Course System implemented at the University level during the Academic year.

Name of programmes adopting CBCS	Programme Specialization	Date of implementation of CBCS/Elective Course System
PhD or DPhil	Biology	01/08/2017
Integrated(PG)	Biology	01/08/2017
PhD or DPhil	Chemistry	01/08/2017
Integrated(PG)	Chemistry	01/08/2017
PhD or DPhil	Computer Systems Science	01/08/2017
Integrated(PG)	Computer Systems Science	01/08/2017
PhD or DPhil	Mathematics	01/08/2017
Integrated(PG)	Mathematics	01/08/2017
PhD or DPhil	Physics	01/08/2017
Integrated(PG)	Physics	01/08/2017
PhD or DPhil	Science Education	01/08/2017
MSc	Biology	01/08/2017
MSc	Wild Life Biology and Conservation	01/08/2017

1.3 – Curriculum Enrichment

1.3.1 – Value-added courses imparting transferable and life skills offered during the year

Value Added Courses	Date of Introduction	Number of Students Enrolled
Science Journalism Course	01/08/2017	43

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1.3.2 – Field Projects / Internships under taken during the year

Project/Programme Title	Programme Specialization	No. of students enrolled for Field Projects / Internships
PhD or DPhil	Science Education	1

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1.4 – Feedback System

1.4.1 – Whether structured feedback received from all the stakeholders.

Students	Yes
Teachers	Yes
Employers	No
Alumni	No
Parents	No

1.4.2 – How the feedback obtained is being analyzed and utilized for overall development of the institution?
(maximum 500 words)

Feedback Obtained

On the academic front, the online anonymous feedback system is used for students where the questionnaire in a Google form is distributed and students are asked to fill it without disclosing their identity. This exercise is carried out at the end of each semester. Some programmes like PhD-Phys at the Main Campus engages with the students twice in a semester to obtain this feedback about the courses taught, in the middle of a semester and at the end of the semester before the final examination. The middle of the semester feedback is used to make appropriate changes in the teaching like pace, the difficulty level of the assignments, etc. For each course, the students evaluate the pedagogical aspects such as course contents, course methodology, pedagogical ability, expertise, originality, personal skills with students, the overall impact of the course, etc. This feedback is used by the teachers to improve the courses. Both the sets of feedbacks are shared with the course instructors. The feedback also includes that on the tutorials and tutors. In some programmes, feedbacks about the course syllabi are also obtained and then the respective subject board carries out the fine-tuning of the syllabi based on this feedback from teachers and students. In HBCSE, at the end of the entire course work by a student, comprehensive feedback is obtained. The feedback is factored into redesigning the overall course structure. On the campus life issues, regular feedback on hostel issues is also obtained by the Hostel Committee from hostel residents in NCRA every 2-3 months, and action is taken based on this input.

CRITERION II – TEACHING- LEARNING AND EVALUATION

2.1 – Student Enrolment and Profile

2.1.1 – Demand Ratio during the year

Name of the Programme	Programme Specialization	Number of seats available	Number of Application received	Students Enrolled
PhD or DPhil	Biology	41	4052	41
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2.2 – Catering to Student Diversity

2.2.1 – Student - Full time teacher ratio (current year data)

Year	Number of students enrolled in the institution (UG)	Number of students enrolled in the institution (PG)	Number of fulltime teachers available in the institution teaching only UG courses	Number of fulltime teachers available in the institution teaching only PG courses	Number of teachers teaching both UG and PG courses
2017	Nil	171	Nil	258	Nil

2.3 – Teaching - Learning Process

2.3.1 – Percentage of teachers using ICT for effective teaching with Learning Management Systems (LMS), E-

learning resources etc. (current year data)

Number of Teachers on Roll	Number of teachers using ICT (LMS, e-Resources)	ICT Tools and resources available	Number of ICT enabled Classrooms	Number of smart classrooms	E-resources and techniques used
258	258	Nil	50	28	Nil
View File of ICT Tools and resources					
View File of E-resources and techniques used					

2.3.2 – Students mentoring system available in the institution? Give details. (maximum 500 words)

Across all the subject boards, each student gets a thesis committee usually comprised of three members, one of whom is the thesis advisor of the student. This committee is usually formed at the time of Ph.D. registration. The primary objective of this committee is to actively mentor the student throughout his/her thesis work by regularly meeting and discussing various issues pertaining to the thesis work progress. This committee meets the student at least once every year to take stock of the students progress. Apart from that, the members of the committee (other than the thesis advisor) regularly interact with the student informally and discuss issues that the student is facing and offer help if required to address them. The committee gives a report on the students progress at the end of the academic year which is taken into consideration while deciding the extension of the research fellowship of the student. Any grievances that arise for the student are first brought to the TC that actively seeks to address the issues and provide redressal for the student. In the Biology Subject Board, the thesis committee actively mentors the student right from his/her entry to the graduate school discussing choices of courses, details of thesis work, etc. In the Physics Subject Board, prior to registration for the thesis, the student is either assigned to a mentor or a three-member internal committee is formed to actively mentor the student. The mentor discusses various academic as well as non-academic issues with the students to help them adjust to the graduate student life at the institute. The mentors also discuss any problems for which the students need assistance of any kind. In the mathematics subject board, the initial couple of years involve rigorous course work where the feedback from the instructors and graduate studies committee is taken regularly and used to mentor students through their course work. In the Science Education subject board, every new student is assigned to a mentor who guides the student through the course work. At the end of two years, the student is asked to take a comprehensive exam and then carry out fieldwork. The outcome of these activities results in the student joining a thesis advisor for the desired thesis problem. For the students who join the MSc programme, their academic progress is monitored regularly by faculty members of the respective department. The students give regular seminar presentations which are attended by all the faculties and appropriate feedback is given to them.

Number of students enrolled in the institution	Number of fulltime teachers	Mentor : Mentee Ratio
520	258	1:2

2.4 – Teacher Profile and Quality

2.4.1 – Number of full time teachers appointed during the year

No. of sanctioned positions	No. of filled positions	Vacant positions	Positions filled during the current year	No. of faculty with Ph.D
342	260	82	11	258

2.4.2 – Honours and recognition received by teachers (received awards, recognition, fellowships at State, National, International level from Government, recognised bodies during the year)

Year of Award	Name of full time teachers receiving awards from state level, national level, international level	Designation	Name of the award, fellowship, received from Government or recognized bodies
2017	Ullas Kolthur	Associate Professor	Fellowship, National Academy of Sciences

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2.5 – Evaluation Process and Reforms

2.5.1 – Number of days from the date of semester-end/ year- end examination till the declaration of results during the year

Programme Name	Programme Code	Semester/ year	Last date of the last semester-end/ year-end examination	Date of declaration of results of semester-end/ year- end examination
PhD or DPhil	PhD-Biol	August Semester / 1st Year	30/12/2017	16/01/2018
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2.5.2 – Average percentage of Student complaints/grievances about evaluation against total number appeared in the examinations during the year

Number of complaints or grievances about evaluation	Total number of students appeared in the examination	Percentage
Nil	390	0

2.6 – Student Performance and Learning Outcomes

2.6.1 – Program outcomes, program specific outcomes and course outcomes for all programs offered by the institution are stated and displayed in website of the institution (to provide the weblink)

<https://www.tifr.res.in/~dbs/students.html>

2.6.2 – Pass percentage of students

Programme Code	Programme Name	Programme Specialization	Number of students appeared in the final year examination	Number of students passed in final year examination	Pass Percentage
PhD-Biol	PhD or DPhil	Biology	11	11	100
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2.7 – Student Satisfaction Survey

2.7.1 – Student Satisfaction Survey (SSS) on overall institutional performance (Institution may design the questionnaire) (results and details be provided as weblink)

No Data Entered/Not Applicable !!!

CRITERION III – RESEARCH, INNOVATIONS AND EXTENSION

3.1 – Promotion of Research and Facilities

3.1.1 – Teachers awarded National/International fellowship for advanced studies/ research during the year

Type	Name of the teacher awarded the fellowship	Name of the award	Date of award	Awarding agency
National	Rishi Khatri	SERB Early Career Research Award 2016-2019.	01/08/2017	SERB
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3.1.2 – Number of JRFs, SRFs, Post Doctoral Fellows, Research Associates and other fellows in the Institution

enrolled during the year

Name of Research fellowship	Duration of the fellowship	Funding Agency
TIFR Research Scholarship	1825	DAE
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3.2 – Resource Mobilization for Research

3.2.1 – Research funds sanctioned and received from various agencies, industry and other organisations

Nature of the Project	Duration	Name of the funding agency	Total grant sanctioned	Amount received during the year
Major Projects	1825	DAE	16100	16100
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3.3 – Innovation Ecosystem

3.3.1 – Workshops/Seminars Conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices during the year

Title of workshop/seminar	Name of the Dept.	Date
Entrepreneurship Development Workshop on Value-Added Agriculture	NCBS, Bengaluru	08/05/2018
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3.3.2 – Awards for Innovation won by Institution/Teachers/Research scholars/Students during the year

Title of the innovation	Name of Awardee	Awarding Agency	Date of award	Category
IEEE Jack Keil Wolf ISIT Student Paper Award	Siddharth Bhandari	IEEE Information Theory Society	01/06/2018	Best Student Paper
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3.3.3 – No. of Incubation centre created, start-ups incubated on campus during the year

Incubation Center	Name	Sponsored By	Name of the Start-up	Nature of Start-up	Date of Commencement
C-CAMP	Bioincubator	BIRAC -Bio technology Ignition Grant for the intial 18 months and then various othe r/private funds	VNIR Biote chnologies	Development validation of nanoparticle based high fidelity cDNA extraction kits	02/08/2017
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3.4 – Research Publications and Awards

3.4.1 – Ph. Ds awarded during the year

Name of the Department	Number of PhD's Awarded
Department of Chemical Sciences	9

Department of Condensed Matter Physics and Material Science	4
Department of High Energy Physics	3
Department of Nuclear and Atomic Physics	5
Department of Theoretical Physics	2
School of Mathematics	6
School of Technology and Computer Science	3
Homi Bhabha Centre for Science Education	2
National Centre for Radio Astrophysics	3
Centre for Applied Mathematics	4
National Centre for Biological Sciences	16
Tata Institute of Fundamental Research Hyderabad	2

3.4.2 – Research Publications in the Journals notified on UGC website during the year

Type	Department	Number of Publication	Average Impact Factor (if any)
International	Department of Biological Sciences	24	Nil
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3.4.3 – Books and Chapters in edited Volumes / Books published, and papers in National/International Conference Proceedings per Teacher during the year

Department	Number of Publication
Department of Chemical Sciences	6
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3.4.4 – Patents published/awarded/applied during the year

Patent Details	Patent status	Patent Number	Date of Award
A Method To Identify And Isolate Pluripotent Stem Cells Using Endogenous Blue Fluorescence	Published	138539796	01/08/2017
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3.4.5 – Bibliometrics of the publications during the last academic year based on average citation index in Scopus/ Web of Science or PubMed/ Indian Citation Index

Title of the Paper	Name of Author	Title of journal	Year of publication	Citation Index	Institutional affiliation as mentioned in the publication	Number of citations excluding self citation
	Ameya	Wave	2017	Nil	Centre	Nil

Revisiting the inhomogeneously driven sine-Gordon equation,	Jagtap, Esha Saha, Jithin D. George and A. S. Vasudeva Murthy.	Motion			for Applied Mathematics TIFR
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3.4.6 – h-Index of the Institutional Publications during the year. (based on Scopus/ Web of science)

Title of the Paper	Name of Author	Title of journal	Year of publication	h-index	Number of citations excluding self citation	Institutional affiliation as mentioned in the publication
Revisiting the inhomogeneously driven sine-Gordon equation,	Ameya Jagtap, Esha Saha, Jithin D. George and A. S. Vasudeva Murthy.	Wave Motion	2017	Nil	Nil	Centre for Applied Mathematics TIFR

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3.4.7 – Faculty participation in Seminars/Conferences and Symposia during the year

Number of Faculty	International	National	State	Local
Attended/Seminars/Workshops	133	134	18	58
Presented papers	80	75	6	29
Resource persons	53	50	8	9

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3.5 – Consultancy

3.5.1 – Revenue generated from Consultancy during the year

Name of the Consultant(s) department	Name of consultancy project	Consulting/Sponsoring Agency	Revenue generated (amount in rupees)
Department of Chemical Sciences	Sudipta Maiti	Horiba Jobin Yvon	120000

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3.5.2 – Revenue generated from Corporate Training by the institution during the year

Name of the Consultant(s) department	Title of the programme	Agency seeking / training	Revenue generated (amount in rupees)	Number of trainees
National Center for Biological Sciences	Multiple training programs on Animal Model/Design, Management,	Multiple Academic and Non Academic Institutions from India and Abroad	1420000	86

Imaging and
Flow Cytometry

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3.6 – Extension Activities

3.6.1 – Number of extension and outreach programmes conducted in collaboration with industry, community and Non- Government Organisations through NSS/NCC/Red cross/Youth Red Cross (YRC) etc., during the year

Title of the activities	Organising unit/agency/ collaborating agency	Number of teachers participated in such activities	Number of students participated in such activities
Signs/Science of Aging	Maharashtra Vygnanik Parishad and YB Chavan Center	1	Nil

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3.6.2 – Awards and recognition received for extension activities from Government and other recognized bodies during the year

Name of the activity	Award/Recognition	Awarding Bodies	Number of students Benefited
Astronomy outreach by Niruj Mohan Ramanujam	ASI Zubin Kembhavi award	Astronomical Society of India	Nil

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3.6.3 – Students participating in extension activities with Government Organisations, Non-Government Organisations and programmes such as Swachh Bharat, Aids Awareness, Gender Issue, etc. during the year

Name of the scheme	Organising unit/Agen cy/collaborating agency	Name of the activity	Number of teachers participated in such activites	Number of students participated in such activites
NA	NA	NA	Nil	Nil

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3.7 – Collaborations

3.7.1 – Number of Collaborative activities for research, faculty exchange, student exchange during the year

Nature of activity	Participant	Source of financial support	Duration
Scientific Research - Electrophysiology of Early stress	Vidita Vaidya and James Chelliah, JNCASR	DBT, Govt of India	5475

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3.7.2 – Linkages with institutions/industries for internship, on-the- job training, project work, sharing of research facilities etc. during the year

Nature of linkage	Title of the linkage	Name of the partnering institution/ industry /research lab with contact details	Duration From	Duration To	Participant
Reading	CEBS-TIFR	CEBS,	01/08/2017	31/07/2018	C S Rajan

projects	joint projects	Mumbai		
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3.7.3 – MoUs signed with institutions of national, international importance, other universities, industries, corporate houses etc. during the year

Organisation	Date of MoU signed	Purpose/Activities	Number of students/teachers participated under MoUs
IUAC	13/02/2018	To record the mutual interests of the Tata Institute for Fundamental Research (TIFR) and Inter University Accelerator Center (IUAC) in exploring, for a period of five years, opportunities in joint research and development, workshops, and exchange vis	3
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CRITERION IV – INFRASTRUCTURE AND LEARNING RESOURCES

4.1 – Physical Facilities

4.1.1 – Budget allocation, excluding salary for infrastructure augmentation during the year

Budget allocated for infrastructure augmentation	Budget utilized for infrastructure development
15679.15	15679.15

4.1.2 – Details of augmentation in infrastructure facilities during the year

Facilities	Existing or Newly Added
Campus Area	Existing
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4.2 – Library as a Learning Resource

4.2.1 – Library is automated {Integrated Library Management System (ILMS)}

Name of the ILMS software	Nature of automation (fully or patially)	Version	Year of automation
Libsys7	Fully	EJB, Rel 1.0	1990
Libsys	Fully	7	1995
KOHA	Fully	16.11.06.000	2014
KOHA	Partially	17.11.06.000	2016
NewGenLib	Partially	3.12	2016

4.2.2 – Library Services

Library Service Type	Existing	Newly Added	Total

Text Books	59166	23381388	1815	3786924	60981	27168312
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4.2.3 – E-content developed by teachers such as: e-PG- Pathshala, CEC (under e-PG- Pathshala CEC (Under Graduate) SWAYAM other MOOCs platform NPTEL/NMEICT/any other Government initiatives & institutional (Learning Management System (LMS) etc

Name of the Teacher	Name of the Module	Platform on which module is developed	Date of launching e-content
G Nagarjuna	Invitation to CLIX (Connected Learning Initiative)	metaStudio (GNEWSYS Studio)	01/06/2018
P. Ajith, lectures were taken by G Srinivasan, Raman Research Institute - Retired	A Random Walk in Astro-physics	Using lifesize UVC server for the lectures recording and filmora software for the video processing	16/05/2018
No file uploaded.			

4.3 – IT Infrastructure

4.3.1 – Technology Upgradation (overall)

Type	Total Computers	Computer Lab	Internet	Browsing centers	Computer Centers	Office	Departments	Available Bandwidth (MBPS/GBPS)	Others
Existing	5551	710	2623	21	117	371	2822	3954	1510
Added	798	111	165	0	10	45	149	405	483
Total	6349	821	2788	21	127	416	2971	4359	1993

4.3.2 – Bandwidth available of internet connection in the Institution (Leased line)

4359 MBPS/ GBPS

4.3.3 – Facility for e-content

Name of the e-content development facility	Provide the link of the videos and media centre and recording facility
Tandberg MXP 1700	https://www.youtube.com/user/TIFRCAM
Tandberg MXP 6000	https://www.facebook.com/TIFRCAM
LifeSize Room 220	https://www.youtube.com/user/TIFRCAM
Lifesize UVC Video center, OBS (Open Broadcaster Software), Lifesize Codec, Filmora video editor, Adobe Suite, Final cut pro video editor, iMovies, YouTube editor etc	https://www.youtube.com/ictstalks
Multimedia Production Team	https://www.youtube.com/channel/UCBoz08Kb4GiVianFv8VUwmq

4.4 – Maintenance of Campus Infrastructure

4.4.1 – Expenditure incurred on maintenance of physical facilities and academic support facilities, excluding salary component, during the year

Assigned Budget on academic facilities	Expenditure incurred on maintenance of academic facilities	Assigned budget on physical facilities	Expenditure incurred on maintenance of physical facilities
1477.03	1477.03	6817.21	6817.21

4.4.2 – Procedures and policies for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc. (maximum 500 words) (information to be available in institutional Website, provide link)

TIFR has different dedicated sections that help in the maintenance and utilization of academic, physical, and support facilities that help in smooth operations of its research as well as teaching. The physical infrastructure such as buildings, power supply, air-conditioning, and ventilation, water supply is looked after by the Technical Services (TSR) section. Similar technical committees are present in all the off campuses at Mumbai, Pune, Bengaluru, and Hyderabad. For building sophisticated scientific equipment there is a dedicated Central Workshop (CWK) apart from smaller workshops in different academic departments. The Central Workshop is equipped with precision fabrication facilities including several computer-controlled CNC machines. There is also a separate Low-Temperature facility (LTF) that provides cryogenic liquids (helium and nitrogen) for scientific experiments to all users in the institute. The state-of-the-art equipment present in all the campuses are maintained by specific academic departments but are available for all users across the institute. The advanced equipment for research and education is maintained by a 100-strong highly skilled permanent scientific personnel attached to various departments. For all the departments on the main campus, TIFR provides common computing facilities through its Computer Centre and Communication Facilities (CCCF). It hosts an email server, web-server, High-performance computing (HPC), and several workstations. It also provides seamless WiFi connectivity throughout the campus. The section also supervises the activities of Lecture Theater and Auditorium given the increasing importance of ICT in organizing lectures/seminars/virtual meetings over the internet. Similar facilities are also available at each of the campuses. For any technical work to be carried out by the centralized technical team, an institute member can make an online request through the DataNet, a dedicated centralized management portal which has been developed in-house. Laboratory space is allocated by the Space Allocation Committee, which keeps track of the needs of the Departments and their research programs for space. The space for laboratory and offices are allocated based on scientific merit and equitable distribution. Upon the retirement of a faculty member or the winding up of a laboratory, space is returned to the committee for further allocation. This ensures efficient utilization of space. The Main Campus has a gymnasium, indoor badminton court, Yoga rooms, and two large playgrounds for football /cricket athletics. These facilities are maintained by the TIFR Sports Club. Similarly, the hostel, canteen, and other facilities are looked after by the respective committees comprised of representations from faculties, administrative, technical, and scientific staff as well as students. Similar arrangements are also in place at all the off campuses.

<https://main.tifr.res.in/maincampus/lectTheatAudi.php>

CRITERION V – STUDENT SUPPORT AND PROGRESSION

5.1 – Student Support

5.1.1 – Scholarships and Financial Support

	Name/Title of the scheme	Number of students	Amount in Rupees

Financial Support from institution	Research Fellowship	519	188835544
Financial Support from Other Sources			
a) National	DBT/CTEP	2	180000
b) International	EMBO/ASCB Travel Grant	1	80000
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5.1.2 – Number of capability enhancement and development schemes such as Soft skill development, Remedial coaching, Language lab, Bridge courses, Yoga, Meditation, Personal Counselling and Mentoring etc.,

Name of the capability enhancement scheme	Date of implementation	Number of students enrolled	Agencies involved
Personal Counselling and mentoring	21/12/2017	41	Parivarthan Counselling, Training and Research Centre
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5.1.3 – Students benefited by guidance for competitive examinations and career counselling offered by the institution during the year

Year	Name of the scheme	Number of benefited students for competitive examination	Number of benefited students by career counseling activities	Number of students who have passed in the comp. exam	Number of students placed
2017	NA	Nil	Nil	Nil	Nil
No file uploaded.					

5.1.4 – Institutional mechanism for transparency, timely redressal of student grievances, Prevention of sexual harassment and ragging cases during the year

Total grievances received	Number of grievances redressed	Avg. number of days for grievance redressal
7	7	54

5.2 – Student Progression

5.2.1 – Details of campus placement during the year

On campus			Off campus		
Name of organizations visited	Number of students participated	Number of students placed	Name of organizations visited	Number of students participated	Number of students placed
NA	Nil	Nil	Nil	Nil	Nil
No file uploaded.					

5.2.2 – Student progression to higher education in percentage during the year

Year	Number of students enrolling into higher education	Programme graduated from	Department graduated from	Name of institution joined	Name of programme admitted to
2017	1	PhD in	Department	NBRC New	Post-

Biology

of
Biological
Sciences

Delhi

Doctoral
Research[View File](#)

5.2.3 – Students qualifying in state/ national/ international level examinations during the year (eg:NET/SET/SLET/GATE/GMAT/CAT/GRE/TOFEL/Civil Services/State Government Services)

Items	Number of students selected/ qualifying
NET	2
No file uploaded.	

5.2.4 – Sports and cultural activities / competitions organised at the institution level during the year

Activity	Level	Number of Participants
Founders Day Sports Tournaments, Main Campus	In-house	225
View File		

5.3 – Student Participation and Activities

5.3.1 – Number of awards/medals for outstanding performance in sports/cultural activities at national/international level (award for a team event should be counted as one)

Year	Name of the award/medal	National/ Internaional	Number of awards for Sports	Number of awards for Cultural	Student ID number	Name of the student
2017	NA	Nil	Nil	Nil	Nil	Nil
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5.3.2 – Activity of Student Council & representation of students on academic & administrative bodies/committees of the institution (maximum 500 words)

TIFR Students Society (TSS) on the Main Campus is an elected student body that serves as a point of contact between the students and the institute administration. The elected members of TSS (a sports secretary, a canteen secretary, a hostel secretary, a cultural secretary, a library in-charge and a mov.in-charge) look after the maintenance of students hostels and also supervise day-to-day operations of the students canteen in TIFR residential colony. Apart from that, TSS monitors library facilities in the institute and also organizes numerous recreational and cultural activities for students. It arranges private screening of movies every week. TSS holds annual sports tournament for Football, Volleyball, Cricket, Badminton, Chess, Table Tennis, etc., and promotes cultural events like celebrations of various festivities, Freshers party, Music events, Student-faculty interaction dinner, etc. Students contribute to most of these activities although TIFR supports some activities that deal with the improvement of infrastructure. HBCSE also has a Students' committee, consisting of three members selected by the students and appointed by the Centre Director, which liaises with the faculty and administration to resolve student-related issues. In HBCSE, the Annual Research Meet is an informal and supportive forum for presentation, discussion, sharing, and debate over academic research which is organized entirely by Research Scholars. In TIFR-H, to encourage the students to take part in fields other than science, cultural colloquiums, sports are arranged and the respective committees comprise mostly the students apart from some representatives from faculty and administration. TIFR has student representation on • Canteen Committee, Science Popularization and Public Outreach Committee, Founder's Day Committee at TIFR Colaba • Canteen Committee, Sports Committee, Library Committee, Hostel Committee at HBCSE • The Hostel Committee, Library Committee, Canteen

Committee, and Computer Facilities Committee at NCRA • Canteen Committee at CAM • Campus Services Cell (looking after issues related to the canteen, Fitness centre, Health Promotion Centre, safety issues and Transport), Sports and Recreation Committee, and Cultural Committee, Cell for Prevention and Resolution of Sexual Harassment of Women at Workplace, Transport Security Committee, Cafeteria Canteen Committee, Childcare cell, Women cell at ICTS • Academic Affairs Committee, Canteen and Recreation Committee, Hostel Committee, Internal Complaints Committee at TIFR-H.

5.4 – Alumni Engagement

5.4.1 – Whether the institution has registered Alumni Association?

Yes

5.4.2 – No. of registered Alumni:

514

5.4.3 – Alumni contribution during the year (in Rupees) :

0

5.4.4 – Meetings/activities organized by Alumni Association :

Awards for Faculties and Students Award in Science Education - Given to any serving or past member (still active in the field of Science Education) of the institute - biennially Prof. Sukumar Biswas PhD Student Award - yearly award given to students pursuing PhD in physics Shri Ramakrishna Cowsik Medal and Smt. Saraswathi Cowsik Medals - given to regular or past member for contributions to a outstanding research paper - Yearly TAA Excellence Award - given to a faculty member for outstanding work in his/her field - Yearly TAA Patent Award - given to a member for contribution to outstanding work in applied science TAA Zita Lobo Memorial Award - Given to a non-academic member of the Department of Biological Sciences for outstanding supportive work TAA Excellence in Teaching Award - given to a faculty member for excellence in teaching and guiding PhD Students - Yearly TAA Geeta Udgaonkar Award - given to a PhD student for best thesis in Physics - Yearly TAA harish Chandra Memorial Award - given to a PhD student for best PhD thesis in mathematics or computer sciences TAA Zita Lobo Award - given to a student of the Department of Biological Sciences for best PhD thesis - Yearly TAA Sasken Award - Given to a student for best PhD Thesis in Technology and Computer Sciences - Yearly TAA B. M. Udgaonkar Award - given to a PhD student for best thesis in Science Education - Biennially Public Lectures JRD Tata Memorial Lecture on Inanimate and Living Bacteria:Flocking and Nano Heat Engine -Prof Ajay Sood: August 3, 2017 Avik Guha Memorial Lecture on Transmission of Monetary Policy in India: Why it matters and how it can be improved by Dr. Viral Acharya National Science Day Lecture on Lessons in time keeping from fly by Dr. Rakesh Maria: February 28, 2018 JRD Tata Memorial Lecture on Science Technology and Knowledge - Kris Gopalakrishnan: 26 July 2018

CRITERION VI – GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 – Institutional Vision and Leadership

6.1.1 – Mention two practices of decentralization and participative management during the last year (maximum 500 words)

1. In the institute, various facilities are managed by the institute-wide committees. The committees managing the most widely used facilities like Canteen, Transport, Library, etc. have Administrative staff as well as Support staff and students as members wherever applicable. Although, the policy

decisions for the facilities are taken by the authorities the Director and the Deans of various faculties and Centre Directors, Registrar and the head of the Administration, the committee has entrusted the role of a detailed assessment of the functioning of the facilities and make recommendations to the authorities from time to time. 2. The Faculties of all schools and centres have a continuous peer-review system for all aspects, including the development of curricula, appointments, promotions, choice of research programs, funding, etc. This leads to a distributed leadership, ensures accountability, and at the same time assuring academic freedom that is essential for a research institution to grow to its full potential. Particularly, the process of the appointment of a new faculty member in the institute involves consultation and evaluation at various levels. This includes scrutiny of the research proposal and research credentials at the individual department level in terms of evaluation of the job talks given by the applicant, assessment based on the reports on the candidate's credentials, and proposal from external reviewers who are leading experts in the subject. At a later stage, the application and the collected reviews are scrutinized in the larger committee that is comprised of senior faculty members from various departments. Ultimately, the application is discussed at the faculty level in Natural Science Faculty for the Physics, Chemistry and Biology subjects and Mathematics Faculty, Computer Science Faculty for their respective subjects before giving a formal recommendation to the institute's Governing Council through Director. This methodology is followed across all centres of the institute.

6.1.2 – Does the institution have a Management Information System (MIS)?

Yes

6.2 – Strategy Development and Deployment

6.2.1 – Quality improvement strategies adopted by the institution for each of the following (with in 100 words each):

Strategy Type	Details
Admission of Students	Subject Board Physics increased the number of questions that require to give either a numerical answer or a symbolic expression from 10 to 15. This was done as the analysis of the previous year results indicate that these type of questions have a better ability to distinguish between the genuinely good candidate against the non-serious candidate.
Industry Interaction / Collaboration	There have been some research projects funded by the industry, and some industries have formal MoUs with TIFR that facilitate collaborations. Internships of people from the industry in TIFR, and access to industry-level technology to TIFR members, has been of mutual benefit.
Human Resource Management	Our recruitment of the faculty entirely focuses on the research achievements and scholarship of the candidates. This way, we are able to recruit the best scientific manpower in the country, and also the cream of returning young Indian scientists who have been awarded their Ph.Ds or

postdoctoral fellowships abroad. TIFR follows the Tenure Track system for the young faculty members joining the institute. Once a young faculty member joins TIFR, he/she begins to take part in the nurture of students, and by and by assumes more responsibilities including lecturing and being the formal guide of a student. Thus, our faculty members begin as excellent scientists and then grow into the role of active and enthusiastic teachers. Besides the Faculty, we have a large support staff. Our policy is to treat them as partners in our larger aims and to encourage them to take responsibility, to make innovations, and to grow with the job.

Library, ICT and Physical Infrastructure / Instrumentation

The library committee oversees the functioning of the library, and a computer committee oversees the ICT infrastructure. Continuous efforts are made to expand access to online journals as well as the book collection. Members are encouraged to suggest new reference books and textbooks be added to the existing collection. Efforts are made to connect all the libraries in various TIFR centres via VPN. The computer committee is responsible for the upgrade of the ICT infrastructure both in terms of hardware and software. Campus-wide WiFi connectivity is also implemented on all the campuses. Video conferencing units are added for remote meeting organization.

Research and Development

Each faculty of the institute is encouraged to apply for grants to fund their research activities. This includes the periodic plan proposals to the Department of Atomic Energy. These proposals are vetted at the institute level before their submission to the funding agencies. Moreover, a periodic review is carried out for various departments and centers where the external subject experts' committee comprised of the world-renowned scientists visits the institute and interacts with the institute members, and gives a detailed assessment of the activities of the departments. Institute strongly encourages collaborations and research visits by the members.

Examination and Evaluation

The rules for extensions of students

were formalized, in the background of the increase in the student fellowships and restriction on the time that be taken for Ph.D. The coursework related rules for Ph.D. registration are strictly adhered to.

Teaching and Learning

From the learning perspective, the TIFR endeavors to provide an enabling environment to our students, which is rich in intellectual stimulation, and at the same time has enough interaction with scientists in the area and supervision and feedback by the teachers. The time they spend in the excellent library and laboratories that we have built over the years are of great help to the students to learn their discipline, in conjunction with our formal courses and examinations. We always try to bring a sense of creative play to all our teaching/learning interactions. Short laboratory orientations and semester-long projects are part of these efforts where students are introduced to the ways of carrying out the front line scientific research. This also helps students get familiar with the research area closest to their choice.

Curriculum Development

TIFR selects its students via a nationwide competitive examination followed by interviews, for which more than 20000 students appear every year. As a result, we get very good students, and our challenge is to make them even better and to help them develop their latent scientific talent so that they become comparable to their peers in the best universities across the world. From the teaching perspective, this involves keeping a continuous tab of new developments in the subjects and going on modifying our course contents in their light. Besides this continuous development, every few years the various Subject Boards revisit their syllabi and update them. We also introduce graduate students to the research groups in the institute working in the frontline areas of research in the form of lab visits and semester-long projects. This helps in molding their scientific talent to absorb the ways of doing frontline scientific research.

E-governance area	Details
<p>Planning and Development</p>	<p>TIFR has an internal Information Systems Development Group, with dedicated staff. The ISDG looks after the information technology requirements and plan of execution for the Institute, developing online procedures for various academic, administrative, and financial processes in the Institute, including the Colaba campus and the Centres and Field Stations. The ISDG works in close collaboration with the relevant Sections of the Institute, adapting existent systems for online functioning and developing new procedures, if necessary to facilitate these.</p>
<p>Administration</p>	<p>The movement of files with approval from authorities at successively higher levels is gradually being moved to Datanet and LDAP, though the process is not complete. This includes applications, such as leave, reimbursement, LTC applications, etc. On the financial side, the tendering process is now largely electronic. Most bookings of rooms, accommodation, transport, canteen facilities, photographic cell, etc. are now done electronically. Bidding for residential accommodation in Institute quarters is done purely electronically.</p>
<p>Finance and Accounts</p>	<p>TIFR has built its own Integrated Information System (TIIS), which is an integrated Enterprise Resource Planning (ERP) solution for TIFR which includes Personal Information System, Payroll, Pension, Provident Fund, Procurements, Material Receipts, Inventory, Budget, Accounting, Finance, and Accommodation. TIIS was implemented at TIFR Main Campus, and other campuses are in the process of transferring from Tally and a few other software to TIIS. In addition to TIIS, Datanet provides information to staff members on their desktops, on e.g. service record, salary, purchase orders, indent status, etc. Financial transactions of some of the government departments are done through the PFMS software.</p>
<p>Student Admission and Support</p>	<p>Web-based admission portal was adopted in collaboration with M/s Embitel, Bengaluru in the year 2008. This is used exclusively for managing the application process for the</p>

	admission written test. We continuously keep upgrading it based on the experiences of candidates as well as institute administration.
Examination	Since the student to faculty ratio is very small pan-TIFR, the need for adopting e-governance has not been felt so far.

6.3 – Faculty Empowerment Strategies

6.3.1 – Teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies during the year

Year	Name of Teacher	Name of conference/ workshop attended for which financial support provided	Name of the professional body for which membership fee is provided	Amount of support
2017	Krishanu Ray	Collective Dynamics of-, on- and around Filaments in Living Cells, ICTS-TIFR, Bengaluru, Oct 28 - Nov 2, 2017	Nil	11114

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6.3.2 – Number of professional development / administrative training programmes organized by the University for teaching and non teaching staff during the year

Year	Title of the professional development programme organised for teaching staff	Title of the administrative training programme organised for non-teaching staff	From date	To Date	Number of participants (Teaching staff)	Number of participants (non-teaching staff)
2017	NA	NA	Nil	Nil	Nil	Nil

No file uploaded.

6.3.3 – No. of teachers attending professional development programmes, viz., Orientation Programme, Refresher Course, Short Term Course, Faculty Development Programmes during the year

Title of the professional development programme	Number of teachers who attended	From Date	To date	Duration
NA	Nil	Nil	Nil	0

No file uploaded.

6.3.4 – Faculty and Staff recruitment (no. for permanent recruitment):

Teaching		Non-teaching	
Permanent	Full Time	Permanent	Full Time
11	Nil	5	Nil

6.3.5 – Welfare schemes for

Teaching	Non-teaching	Students
<p>All permanent teachers and their dependents are members of a Contributory Health Services Scheme (CHSS) which provides medical support. This access is also extended to the retired members. A free annual medical checkup is provided to all the teachers. Apart from this, the following activities were taken up towards the welfare of the teaching staff in the institute: Main Campus: • Conducted First Aid Program for staff members in coordination with St. John Ambulance (India), Indian Red Cross Society. • Organized lecture on "Cashless transactions – an informative talk for end-users" HBCSE: All teaching staff has access to a community centre in neighbouring Anushaktinagar with a swimming pool and other facilities. ICTS: • Sports initiatives like Marshal Art training for students and staff members. • Health screening camps being arranged periodically. TIFRH: • Fully equipped Gymnasium is made available for all the teaching staff members • TIFR Employee's Cooperative Credit Society provides welfare schemes that are operated as an educational loan, Personal loan, Home loan, etc. • General Physician visit is organized twice a week and the Psychiatrist Consultation is provided whenever required.</p>	<p>All permanent non-teaching staff members and their dependents are members of a Contributory Health Services Scheme (CHSS) which provides medical support. This access is also extended to the retired members. A free annual medical checkup is provided to all the teachers. Apart from these following activities were taken up towards the welfare of the teaching staff in the institute: Main Campus: • Conducted First Aid Program for staff members in coordination with St. John Ambulance (India), Indian Red Cross Society. • Organized lecture on "Cashless transactions – an informative talk for end-users" • Financial support to one staff member for participating in sports competitions. HBSCE: All non-teaching staff has access to the community centre in neighbouring Anushaktinagar with a swimming pool and other facilities. ICTS: • Sports initiatives like Marshal Art training for students and staff members. • Health screening camps being arranged periodically. TIFRH: • Fully equipped Gymnasium is made available for all the non-teaching staff members • TIFR Employee's Cooperative Credit Society provides welfare schemes that are operated as an educational loan, Personal loan, Home loan, etc. • General Physician visit is organized twice a week and the</p>	<p>Students are provided with the free medical facilities that are existing in the institute. Main Campus: The students have access to a select panel of specialists from the city of Mumbai for medical treatments with subsidized fees. Financial help towards medical treatment is also provided on a case by case basis. Students have access to the recreation center on the campus. HBCSE: Students have free medical care for OPD and hospitalization. They have access to sports and gym facilities on campus. NCRA: All students are enrolled in the institute medical scheme CAM: The students are covered via a separate health insurance scheme that is fully paid from the centres budget. In addition, a GP is made available for consultation on campus two times a week. ICTS: • Health insurance scheme for all the students in which there is a provision of general OPD facilities and Annual Health Check-up without any waiting period. • Sports initiatives like Marshal Art training for students and staff members. • Health screening camps being arranged periodically. NCBS: Students are covered under the Group Mediclaim policy wherein inpatient treatment up to Rs. 3 lakh is covered. TIFRH: • Fully equipped Gymnasium is made available for all the</p>

Psychiatrist Consultation is provided whenever required.

students • Sports and recreational activities are organized throughout the year • General Physician visit is organized twice a week and the Psychiatrist Consultation is provided whenever required.

6.4 – Financial Management and Resource Mobilization

6.4.1 – Institution conducts internal and external financial audits regularly (with in 100 words each)

The Institute has its pre-audit cell for internal financial audits. The Statutory Auditors, appointed with the approval of the Council of Management of TIFR perform half-yearly as well as a yearly financial audit. M/s. G D. Apte and Company has performed the audit work of the Institute from F.Y. 2017-18. The Statutory auditor visits every Center F.S yearly as well as a half-yearly audit. Additionally, the Internal Inspection Wing (IIW) of the Department of Atomic Energy conducts an annual audit of the Institute. Moreover, a team of Auditors of Comptroller and Auditor General of India also conducts the annual audit.

6.4.2 – Funds / Grants received from management, non-government bodies, individuals, philanthropies during the year(not covered in Criterion III)

Name of the non government funding agencies /individuals	Funds/ Grnats received in Rs.	Purpose
INFOSYS, TIFR ALUMINI ASSOCIATION ETC.	35901000	ENDOWMENT, AWARD
No file uploaded.		

6.4.3 – Total corpus fund generated

0

6.5 – Internal Quality Assurance System

6.5.1 – Whether Academic and Administrative Audit (AAA) has been done?

Audit Type	External		Internal	
	Yes/No	Agency	Yes/No	Authority
Academic	No	Null	Yes	International Review Committee through Director TIFR
Administrative	No	Null	No	Null

6.5.2 – What efforts are made by the University to promote autonomy in the affiliated/constituent colleges? (if applicable)

Not applicable as there are no affiliated colleges.

6.5.3 – Activities and support from the Parent – Teacher Association (at least three)

As the TIFR Graduate School caters to only post Graduate students, the institute does not have a Parent-Teacher Association.

6.5.4 – Development programmes for support staff (at least three)

1. The institute organized an Intensive Training Fire Prevention Fire Fighting programme for the security staff from June to November 2017 for better preparation to handle related emergencies. 2. Administrative Training was organized for the support staff with the help of instructors from DAE.

6.5.5 – Post Accreditation initiative(s) (mention at least three)

1. TIFR Participated for the first time in NIRF 2018 rankings. The Ranking agency included TIFR in a Special Category of institutions which have large research budget, mostly doctoral students, and a smaller number of faculty members. 2. A course on Scientific Writing was conducted in July 2018 in the Main Campus of the institute for the students who had completed one year in physics, chemistry, biology, and CSS. Based on the feedback from this course, further courses may be organized. While this was a one-week course, the possibility of a Sunday-only course will also be looked into. 3. In the Main Campus of the institute, a lecture room (WS14) has now been equipped with the facility of lecture-recording, videoconferencing, and lecture-streaming. It may be used to deliver lectures to other campuses too. The course coordinators at various campuses will have to coordinate for this. The room can be used as a regular lecture room, however, preference will be given to those who offer to record the courses or give the courses at multiple campuses simultaneously.

6.5.6 – Internal Quality Assurance System Details

a) Submission of Data for AISHE portal	Yes
b) Participation in NIRF	Yes
c) ISO certification	No
d) NBA or any other quality audit	No

6.5.7 – Number of Quality Initiatives undertaken during the year

Year	Name of quality initiative by IQAC	Date of conducting IQAC	Duration From	Duration To	Number of participants
2018	Course on Scientific Writing	02/07/2018	02/07/2018	05/07/2018	105
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CRITERION VII – INSTITUTIONAL VALUES AND BEST PRACTICES

7.1 – Institutional Values and Social Responsibilities

7.1.1 – Gender Equity (Number of gender equity promotion programmes organized by the institution during the year)

Title of the programme	Period from	Period To	Number of Participants	
			Female	Male
"The Sixteenth V. G. Kulkarni Memorial Lecture by Prof. Rohini Godbole on Women in Physics and Mathematics (HBCSE)"	21/09/2017	21/09/2017	50	50

	advantages and disadvantages	and contribute to local community					
2017	Nil	Nil	Nil	Nil	NA	NA	Nil
No file uploaded.							

7.1.5 – Human Values and Professional Ethics Code of conduct (handbooks) for various stakeholders

Title	Date of publication	Follow up(max 100 words)
Guidelines on Academic Ethics	01/08/2017	The guidelines on academic ethics were brought out on 4th June 2012. The link to the guidelines is made available on the institute website (Weblink: https://www.tifrr.res.in/webdocs/TIFR-doc-ETHICS.pdf). Besides, every year, the new batch of research scholars who take admission to the institute programmes are made familiarised with these guidelines and a special orientation is carried out which is also a part of the research methodology course in graduate school.

7.1.6 – Activities conducted for promotion of universal Values and Ethics

Activity	Duration From	Duration To	Number of participants
Rashtriya Ekta Diwas	31/10/2017	31/10/2017	1278
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7.1.7 – Initiatives taken by the institution to make the campus eco-friendly (at least five)

1. Restricted entry of automobiles in the Hyderabad Campus. 2. Pesticides are not used in the NCBS Bengaluru Campus. 3. Addition of 10 kW On-Grid Solar Panel at the car parking rooftop in the ICTS Campus. 4. Sensor-based water taps were installed in the washbasins on the NCBS campus. 5. Use of single-use plastic is minimized and people are encouraged to use metal or glass cups. 6. In the TIFR H campus, the rainwater harvesting plant is made operational which collects the rainwater around the campus to the STP where in this water upon treatment is used for gardening and internal sewerage line. 7. In the HBCSE campus, an urban farm project was initiated in November 2017. 8. Expert was invited to conduct an awareness session for staff, on co-existing with snakes.

7.2 – Best Practices

7.2.1 – Describe at least two institutional best practices

Best Practice 1: PAN-TIFR Subject Boards and promotion/evaluation committees 1. Title of the Practice PAN-TIFR Subject Boards and promotion/evaluation committees 2. Objectives of the Practice TIFR has it's "main campus" in Colaba,

Mumbai, and 6 centers in Hyderabad, Bangalore, Pune, and Mumbai. While there is some overlap between the Centers, each Center has a focus that is unique and has the expertise that is not found in other Centers. The objective for PAN-TIFR Boards and Committees is to run our procedures in a uniform and fair manner, and also to get wide input from expertise that may be available in one Center and not in another.

3. The Context or challenging issues With TIFR's long-standing tradition of interaction and collaboration, there were no major challenges except to set up appropriate technology for the participation of people across different Centers. We use Video-Conferencing/ teleconferencing/ other online platforms extensively

4. The Practice Subject Boards: the PAN-TIFR subject boards in each subject have shaped our graduate programme to world-class standards. A TIFR Ph.D. is among the most valued degrees within India and is well respected internationally. Promotion committees: Few Institutions have the range of expertise available in the TIFR system. Our promotion committees have 2 stages: A local committee of faculty within the discipline who are 2 grades above the candidate being evaluated, and a pan-TIFR "Core Committee" that discusses each case taking into consideration other cases at the same stage/ discipline. The recommendation then goes to the Director. All new faculty appointments and promotions are done after examination and discussion of referee letters at each stage. At least 15 letters are solicited from a list that contains national and international experts, suggested by the candidate and also names suggested independently by the departmental Chairperson/ Dean/ subject experts. A dossier containing the candidate's research proposal and past achievements is sent to each referee. When approximately 9-10 letters are obtained from a mix of international, national, candidate's list and independent-list experts, the local committee discusses the case extensively. Any positive comments are carefully weighed, any negative comments are carefully assessed. The report of the local committee contains a detailed assessment of the candidate after incorporating the comments of the referees. This report is presented by a Chair of the local committee or an in-field expert, to the Core Committee. Here, PAN-TIFR faculty discuss the case after hearing the report. Promotion is decided after normalizing with other similar cases in the recent past and incorporating changes in policies if any. The entire process is conducted with the utmost confidentiality.

5. Evidence of Success The success of our Subject Boards is evidenced by the fact that our Ph.D. students get postdoctoral positions in top-notch Universities worldwide (Harvard, NIH, Stanford, to name a few) and our MSc students get admitted to top-notch Ph.D. Institutes worldwide (Caltech, Cornell, Yale, U. Chicago, to name a few). The success of our promotion procedures is evidenced by the top-notch research TIFR produces, which is recognized by SS Bhatnagar Awards, Infosys Prizes, and memberships of Academies.

6. Problems Encountered and Resources Required There are no problems in operating PAN-TIFR Subject Boards and promotion committees except occasional communication snafus which are addressed quickly. Resources: broadband internet connectivity and suitable computers and other electronic systems.

7. Notes (Optional) None

Best Practice 2: Annual review of students for the research scholarship extension

1. Title of the Practice Annual review of students for the research scholarship extension

2. Objectives of the Practice The objective of this practice is threefold (a) to have a detailed review of the students progress towards the Ph.D. and plans for future work to enable thesis work of the highest order, (b) to train the students in presenting their work for an open review, discussing their work with a review committee, etc. which are critically important skills, and (c) to have a rigorous process by which to determine whether to continue a student's research scholarship.

3. The Context or challenging issues: Students who enter TIFR after having finished their B.Sc./M.Sc. are amongst the best students in the country. However, often although their knowledge of the subject is excellent, they lack the skills in effectively presenting the work done. This is a major handicap, since presenting research work is a critically important

aspect of doing research. A major challenge that has to be faced is the lack of adequate background and preparation on the part of the students as to how to present one's work for a review. In the early years particularly, significant effort has to be put in (often by the Ph.D. guide) in training the student on how to present the work in an open seminar, as well as how to bring out the salient points of the work in face to face discussions with a review committee.

4. The Practice The annual review of students is a detailed process. Each student has to give a writeup to the Thesis Monitoring Committee (TMC) describing the work done over the year, as well as plans for the following year. The student also makes an open presentation of the work done over the year. This presentation is evaluated by all the faculty members present for the talk, and not just the TMC. The evaluation includes critical remarks on the quality of the content, the clarity of the presentation, the handling of questions asked, etc. This feedback is provided to the student, which helps them identify what worked, as well as areas for improvement. The TMC then has a meeting with the student where the research work carried out as well as the plans for the next year are discussed in detail. The TMC often makes suggestions regarding possible directions for future research, the pacing of the work, etc. For senior students, the TMC also provides career counseling. The detailed minutes of this review are provided to the student. This kind of detailed review and feedback process is very uncommon in the Indian system.

Faculty members regard these activities as important and are happy to sit through student talks as well as serve in the TMC. As such there are no major constraints/limitations. 5. Evidence of Success TIFR students are generally regarded as being very well trained, not just in doing research, but also in giving presentations and talks. The evidence of success is primarily in the quality of the research thesis done at TIFR, and the positive comments on these by the external reviewers. Additionally, TIFR students often get awards for their presentations at conferences, attesting to both the quality of the work as well as their training in making good presentations. 6. Problems Encountered and Resources Required No significant problems have been encountered. The major resource required is time and effort on the part of faculty members, which they are generally happy to contribute. 7. Notes (Optional) None

Upload details of two best practices successfully implemented by the institution as per NAAC format in your institution website, provide the link

<https://www.tifr.res.in/NAAC/TIFRBestPractices2017-18.pdf>

7.3 – Institutional Distinctiveness

7.3.1 – Provide the details of the performance of the institution in one area distinctive to its vision, priority and thrust in not more than 500 words

The international Olympiad movement, which brings the most talented secondary and higher secondary students of the world together in a friendly competition of the highest level, is a true celebration of the very best in school level science and mathematics. India has been participating for nearly twenty years in the international Olympiads in Mathematics, Physics, Chemistry, Biology, Astronomy, and Junior Science. The enrollment of students has grown steadily over time, and currently is between 20,000 and 150,000 in different subjects.

As the nodal agency for all the science and mathematics Olympiads in the country for more than two decades, the Homi Bhabha Centre for Science Education (HBCSE) -- a national centre of TIFR -- has been entrusted with the selection and training of the Indian teams for the six international Olympiads every year. In the process, infrastructure in the form of high-quality training laboratories has been developed on the HBCSE campus. Along with the in-house capacity, a large nationwide community of teachers and researchers has been built who are heavily invested in the development of theoretical and experimental training resources and challenging assessment tools. Much of this

educational material has been disseminated to a wide population of students and teachers in the form of books and experimental kits. The Olympiad programme is run in close collaboration with national teacher associations in each of the major subjects. Like every year, the national Olympiad programme of the 2017-2018 cycle in the science subjects followed a five-stage process, starting with a nationwide examination organised by the teacher associations. The HBCSE conducted the national level second stage examinations which were designed to assess conceptual understanding, logical reasoning, and the ability to apply problem-solving skills to novel situations, both theoretical and experimental. The training was included from the third stage, which was a camp of duration two weeks to one month (depending on the subject) held at the HBCSE. These camps consisted of lectures, tutorials, laboratory sessions, and selection tests. The students selected for the Indian teams underwent further training prior to their departure for the international Olympiads. The mathematical Olympiad programme followed a very similar programme. At the international Olympiads in 2018, out of the 30 Indian students in all, 12 secured gold medals, another 13 silver, and 4 bronze, while the remaining student received a certificate of honourable mention. An outstanding performance came in the International Physics Olympiad 2018 where all 5 students bagged gold medals, thus securing the top spot for India, along with China, in the medals tally. Overall, since participation began in 1998, nearly 450 Indian students have been sent to the science Olympiads having been selected and trained by the HBCSE. The performance has been consistently excellent with 99 of the students bagging medals or securing honourable mentions. Of these 37 have been gold medals, ensuring that India has almost always been among the top ten countries in most subjects.

Provide the weblink of the institution

<https://olympiads.hbcse.tifr.res.in/>

8.Future Plans of Actions for Next Academic Year

1. Revision of honoraria for the thesis examiners: The Ph.D. thesis examiners are given an honorarium of Rs. 5000. This was last revised about 10 years ago. In the light of the time and expertise that the examiners offer TIFR, and keeping in mind parity with the honoraria offered by peer institutions, it was decided that steps be taken to revise the amounts of these honoraria. 2. Converting the paper-based written entrance test for the Graduate school admissions to online mode: TIFR has been conducting nationwide written examinations for its admissions for many years. The number of students appearing for the examination is growing at a large rate, and conducting these examinations with in-house resources is becoming increasingly difficult. Many peer institutions have started conducting their examinations in the online format, and TIFR has been approached by many agencies that specialize in conducting examinations in this manner. This may also help in increasing the reach of the entrance test. It was decided to take steps towards making the entrance test online. 3. To make an in-house online platform for the Visiting Students Research Programme selection: The VSRP summer research programme of TIFR is one of the most well-known programmes of this kind. The number of students applying for this has been increasing every year, and it is important to have online application processing. This is being outsourced to an external agency, however keeping in mind the long-term stability and robustness of the procedure, it was thought that developing this module in-house (through the Computer Centre in TIFR Mumbai) would be advisable.