



Yearly Status Report - 2016-2017

Part A

Data of the Institution

1. Name of the Institution		HOMI BHABHA NATIONAL INSTITUTE
Name of the head of the Institution		Prof. P.D. Gupta
Designation		Vice Chancellor
Does the Institution function from own campus		Yes
Phone no/Alternate Phone no.		02225597638
Mobile no.		9969102829
Registered Email		registrar@hbni.ac.in
Alternate Email		vcoff@hbni.ac.in
Address		2nd floor, Training school complex Anushaktinagar, Mumbai 400094
City/Town		Mumbai
State/UT		Maharashtra
Pincode		400094

2. Institutional Status					
University	Central				
Type of Institution	Co-education				
Location	Urban				
Financial Status	central				
Name of the IQAC co-ordinator/Director	Dr. Avichal Kapur				
Phone no/Alternate Phone no.	02225597627				
Mobile no.	9969102829				
Registered Email	registrar@hbni.ac.in				
Alternate Email	dureja@hbni.ac.in				
3. Website Address					
Web-link of the AQAR: (Previous Academic Year)	http://www.hbni.ac.in/main/dsp_doc.html?nm=NAAC/agr2016.pdf				
4. Whether Academic Calendar prepared during the year	Yes				
if yes,whether it is uploaded in the institutional website: Weblink :	http://www.hbni.ac.in/students/dsp_file.html?nm=students/acdm_clndr.pdf				
5. Accrediation Details					
Cycle	Grade	CGPA	Year of Accrediation	Validity	
				Period From	Period To
1	A	3.53	2015	11-May-2015	10-May-2020
6. Date of Establishment of IQAC			27-Jun-2014		
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		

Participation in NIRF	20-Dec-2016 1	40
IQAC meetings and Sensitization of Faculty and Deans	07-Nov-2016 1	40
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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)

(i) The course curriculum for PGD programmes were designed, reviewed and approved by discipline wise Training School Committees and Apex Committee of the Training School. (ii) Implemented CBCS in all the programmes and courses of HBNI, (except in Medical and Health Sciences programmes, these follow MCI guidelines) all the course curriculum are structured as (a) Fundamental Courses (b) Core Courses and (c) Elective courses. (iii) Adopted a continuous assessment system involving periodically conducted examinations (iv) Implemented quality improvement strategies in the academic programmes (v) Implemented innovative and best practices which are institution centric, decentralized academic governance, timely declaration of results.

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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	Achievements/Outcomes
Review of course curriculum: Revision of syllabus and introduction of new courses in the Five Year Integrated programme in Master of Science: Physical Sciences, Chemical Sciences, Mathematical Sciences, Life Sciences	The course curriculum were designed, reviewed, and introduced for the Five year Integrated MSc Physical Sciences, Mathematical Sciences, Chemical Sciences, Life Sciences
Implementation of CBCS in all the programmes except Medical and Health Sciences programmes	Implemented CBCS in all the programmes and courses of HBNI, (except in case of Medical and Health Sciences). All the course curriculum are structured as (a) Fundamental Courses (b) Core Courses and (c) Elective courses
Introduction of a Continuous assessment and evaluation system in the CIs/ OCC	Adopted a continuous assessment system by periodically conducting examinations
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14. Whether AQAR was placed before statutory body ?

Yes

Name of Statutory Body	Meeting Date
Standing Committee of Dean's meeting (Fifteenth meeting)	18-Jul-2017

15. Whether NAAC/or any other accredited body(s) visited IQAC or interacted with it to assess the functioning ?

No

16. Whether institutional data submitted to AISHE:

Yes

Year of Submission

2016

Date of Submission

30-Sep-2016

17. Does the Institution have Management Information System ?

Yes

If yes, give a brief description and a list of modules currently operational (maximum 500 words)

A state of art website with information about HBNI academic activities, student related information is given for the benefit of the students at all times, the same is well illustrated and self explanatory. A portal for management and processing of student matters was designed and is under development.

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
Mtech	ENGG01	Engineering Sciences (BARC/IGCAR)	11/07/2016
PhD or DPhil	LIFE04	Life Sciences (TMC-ACTREC)	24/03/2017
PhD or DPhil	LIFE04	Life Sciences (SINP - post MSc Biophysical Sciences))	11/07/2016
PhD or DPhil	PHYS04	Physical Sciences (IoP)	11/07/2016
PhD or DPhil	MATH04	Mathematical Sciences (HRI)	16/04/2017
Integrated(PG)	PHYS13 CHEM13 MATH13 LIFE13	Five yr. Integrated Prgm: Physical Sciences, Chemical Sciences, Life Sciences, Mathematical Sciences	23/05/2017
PhD or DPhil	PHYS04	Physical Sciences (IPR)	11/05/2016
PG Diploma	HLTH11	Medical and Health Sciences: Radiological Physics (TMC)	05/09/2016

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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
Mtech	Softskills programme	01/08/2016	SS02	01/08/2016
PG Diploma	Softskills Programme	01/08/2016	SS02	01/08/2016
PG Diploma	Medical Radio Isotope Techniques (Diploma level)	16/08/2016	HLTH07	16/08/2016
PG Diploma	Fusion Imaging Technology (PG Diploma)	22/08/2016	HLTH16	22/08/2016

PG Diploma	Radiation Physics (Diploma level)	22/08/2016	HLTH11	22/08/2016
PG Diploma	Administrative and Management Practices in Nuclear Security	22/08/2016	SS03	22/08/2016
Mtech	Management and Administrative practices in Nuclear Security	01/08/2016	SS03	01/08/2016
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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
DM	Interventional Radiology (TMC)	22/08/2016
PhD or DPhil	Chromatography and Mass Spectrometry, Advanced Microscopy and Imaging, Synthetic Biology: 21st Century Biological Engineering, Drug Discovery: Modern Day Approach (SINP)	08/08/2016
Integrated(PG)	5 year Integrated MSc Prgm. Physical Sciences, Chemical Sciences, Life Sciences and Mathematical Sciences: MACRO MOLECULAR CRYSTALLOGRAPHY, ION CHANNELS, CONCEPTS IN MECHANOBIOLOGY, MOLECULAR ERRORS IN DISEASES PATHOGENESIS, CHEMICAL BIOLOGY, BIOINFORMATICS (NISER)	01/08/2016
PhD or DPhil	Physical Sciences (IoP)	01/08/2016
MSc	Physical Sciences (HRI - PHYS08)	08/08/2016
PhD or DPhil	RRCAT: Engineering Sciences	13/03/2017
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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
Mtech	Engineering Sciences	01/08/2016

MPhil	Physical Sciences, Chemical Sciences, Life Sciences	01/08/2016
MSc	Engineering Sciences	01/08/2016
PG Diploma	Engineering Sciences, Physical Sciences, Chemical Sciences, Life Sciences	01/08/2016
Integrated(PG)	Integrated MSc programme Physical Sciences, Chemical Sciences, Mathematical Sciences, Life Sciences	01/08/2016
MSc	Physical Sciences	01/08/2016

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
Softskills Programme for MTech students	01/08/2016	173
Softskills Programme for PG Diploma students	01/08/2016	89
Technical Communication I II of NISER for MSc 5 year integrated programmes	01/08/2016	122
Certified Fellowship programmes (CFP) in different areas of Oncology	01/08/2016	10
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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
Mtech	Engineering Sciences - Mini project	173
Integrated(PG)	Five Year Integrated programme in Physical Sciences, Chemical Sciences, Life Sciences and Mathematical Sciences	105
PG Diploma	Engineering Sciences, Physical Sciences, Chemical Sciences, Life Sciences, Technical visits, exposure to FBR, Dhruva reactor plants	89
MSc	Health Sciences: Clinical Research	10

MD	Health Sciences - various super specialities	25
MCh	Health Sciences - various super specialities	25
DM	Health Sciences - various super specialities	30
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1.4 – Feedback System

1.4.1 – Whether structured feedback received from all the stakeholders.

Students	Yes
Teachers	Yes
Employers	
Alumni	
Parents	

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

Feedback Obtained
<p>The Homi Bhabha National Institute (HBNI) is a unique Deemed to be University, offering academic programs in 10 different constituent institutions (CIs) and an Off Campus Centre (OCC). Nearly half of the students are employees of DAE. The motivation and expectation of such employee students are naturally different from students who join HBNI to acquire a degree/ diploma and move further into academic/professional career. Also, many HBNI students pursue basic research in a variety of disciplines, while others pursue research programs that have a vector towards applications. CIs/OCC regularly collect feedback from the students concerning the course work and class room lectures. This feedback helps to understand the effectiveness of the course syllabus, classroom delivery, teaching quality and help identify the gaps of the lectures. The lecturers are also advised to obtain the informal feedback regularly so that they can gauge the pulse of their classroom and make necessary changes in teaching methodology to suit the class.</p>

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	Mathematical Sciences, Physics and life Sciences (IMSc)	24	1581	24
PhD or DPhil	Mathematical and Physical Sciences (HRI)	9	231	9
PhD or DPhil	Physical sciences, Life Sciences, Mathematical Sciences,	150	1301	78

	Chemical Sciences (NISER)			
Integrated(PG)	Physical Sciences, Chemical Sciences, Mathematical Sciences, Life Sciences (NISER)	130	54512	122
MSc	Nursing Sciences, Clinical Research	20	361	15
MSc	Engineering Sciences (VECC)	3	409	3
Mtech	Engineering Sciences (BARC, IGCAR, VECC, RRCAT, IPR)	105	127046	105
PG Diploma	Engineering Sciences (BARC, IGCAR, RRCAT, VECC, IPR)	59	18644	59
PG Diploma	Fusion Imaging Technology	10	54	10
PhD or DPhil	Life Sciences (TMC-ACTREC)	21	1002	21
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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
2016	0	2874	0	1014	0

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
1014	1014	1224	95	0	1224

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

Students are mentored by Doctoral Committee for PhD programmes, and MTech Committee for MTech programmes, MPhil Thesis Committee for MPhil programmes and such other PG Programmes Committee for MSc and MSc 5 Year Integrated programmes. There exists a continuous process of students mentoring, through all the academic courses, project work and mini projects in all the CIs/ OCC. The facilities are also extended to selected students from outside and when the requirement arises. The students are always welcome and encouraged to interact outside the classes during the course work. After the course work, they are encouraged to get into the research aspects, and interact outside the classroom. Towards the end of research programme, the supervisor and other faculty members help the student to look for the places for career development and institute forwards supporting letters, whenever required. They are encouraged to undertake 6 month project work in such sectors that are relevant for career development. HBNI has a well defined policy for mentoring newly admitted students and enrolled graduate students. Students from various geographies and socioeconomic backgrounds, urban rural mix of students join the PG PhD programmes following due processes as stipulated in the CIs/ OCC.

All the CIs/ OCC conduct student induction programme with the objective to orient them in behavioural, emotional, cultural aspects. They are also well informed about the detailed academic and related activities in advance. For PG programmes there is MTech Project Monitoring Committee, which mentors students in the project work and related all academic activities. Students have access to their guides and mentors at all times. Similarly, for the PhD programme the student specific Doctoral Committee provides the complete mentoring and guidance to the research students. The student specific guide also mentors the student in their postdoctoral fellow as well. External members in DC is also proposed taking into account the specialities of thesis and research needs, they also mentor the student as per needs of sectoral growth and employment. Provision of Institute information regulations: HBNI at the central level prepares Student information Brochure, which highlights about the university level activities and student related matters in terms of academic activities, academic regulations, ordinances and other academic requirements. In each of the CIs/ OCC, Dean Student Affairs is the key person to inform and guide students in case of concerns like regulations, student matters of course requirements, guides, external interactions. Each of the CIs/ OCC have a Student Grievance Committee for students to have access to key relevant information and raise issues if any and resolve the matter at the CI level. In case they are not satisfied, they can address directly to the Central Office and Vice Chancellor is the final authority.

Number of students enrolled in the institution	Number of fulltime teachers	Mentor : Mentee Ratio
2874	1014	3

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
1181	1014	167	0	888

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
2016	Dr. Musharaf Ali	Professor	Homi Bhabha Science and Technical Excellency Award for Computational and Theoretical Chemistry
2016	Dr. Sreenivas Tulumuri	Professor	NATIONAL GEOSCIENCE AWARD, MINISTRY OF MINES, GOVT OF INDIA, OUTSTANDING

			ENGINEER (MINERAL BENEFICIATION) RD INDIAN INST OF MINERAL ENGINEERS, JAMSHEDPUR, BINANI GOLD MEDAL FOR BEST PAPER IN NONFERROUS METALLURGY, INDIAN INSTITUTE OF METALS,
2017	Prof. S.M. Yusuf	Professor	Fellow of the Indian Academy of Sciences, Raja Ramanna Prize Lecture in Physics, MRSIICSC Superconductivity Materials Science Annual Prize, Fellow of The National Academy of Sciences, India , P. K. Iyengar Memorial Award for excellence in Experiment
2017	Prof. Rajan Mittal	Professor	Homi Bhabha Science Technology Award, Material Research Society of India (MRSI) Medal , Fellow, Maharashtra Academy of Sciences,
2017	Dr. Amit Sinha	Professor	The PMAI Guiding Hand Award for Faculty by Powder Metallurgy Association of India (PMAI), 2017
2017	Dr. Archana Sharma	Professor	Fellow of INAE (FNAE), Fellow of IEI (FIE)
2017	Dr. Vijay Kodiyalam	Professor	Awarded Fellow of the Indian Academy of Sciences, for 2017, by the Indian Academy of Sciences, Bangalore.
2017	Dr. Dishant Mayurbhai Pancholi	Professor	Awarded 'B M Birla Science prize' jointly with Neena Gupta of ISI. This award is mainly for Dishant Pancholi's contributions to

			the understanding of 5manifolds.
2017	Dr. Amritanshu Prasad (IMSc)	Professor	Awarded Srinivasa Ramanujan Memorial AwardLecture, for 2017, by the Indian Mathematical Society for On the Timed Plactic Monoid.
2017	Dr. Sanjeev Wagmare (TMC ACTREC)	Professor	DST SERB Travel Award (attended Gorodn research Conference May 2017)
2016	Dr. C.P. Singh (RRCAT)	Assistant Professor	Group achievement award for "Development of engineered high average power intracavity frequency
2016	Dr. K. Bindra (RRCAT)	Professor	EXCELLENCE IN SCIENCE, ENGINEERING AND TECHNOLOGY AWARD
2016	Dr. J.A. Chakera (RRCAT)	Professor	EXCELLENCE IN SCIENCE, ENGINEERING AND TECHNOLOGY AWARD
2016	Dr. J. Jayabalan (RRCAT)	Associate Professor	DAESET SCIENTIFIC TECHNICAL EXCELLENCE AWARD
2017	DR. R. S. Ningthoujam	Professor	Fellow of Indian National Academy of Sciences
2017	Dr. Rahul Shukla (RRCAT)	Assistant Professor	Developing Microsystems and Piezoelectric based Structures for Adaptive Optics" rated amongst Top Posters under Make in India theme in Sensitizing Youth for Flagship Program of Government in India International Science Festival
2016	Dr. Vineet Kumar (RRCAT)	Assistant Professor	Group Achievement Award, Department of Atomic Energy, Govt. of India

2016	Dr. C. Gunanathan (NISER)	Associate Professor	ECRP EVONIK Research proposal award
2016	Dr Subhankar Bedanta (NISER)	Assistant Professor	DAAD Fellowship
2016	Prof. Bedangadas Mohanty (NISER)	Professor	Fellow of Indian National Science Academy
2016	Prof. T.K. Chandrashekar (NISER)	Professor	SASTRA CNR Rao Award
2016	Dr. Victor Roy (NISER)	Assistant Professor	DST Inspire Faculty Award
2016	Prof. Bedangadas Mohanty (NISER)	Professor	Fellow of Indian Academy of Science
2016	Dr. Ajay Kumar Nayak (NISER)	Assistant Professor	Ramanujam Fellowship
2016	Prof. Bedangadas Mohanty (NISER)	Professor	JC Bose National Fellowship Fellow of National Academy of Sciences and Utkalmani Yuva Prativa Samman
2016	Dr. Chandan Goswami (NISER)	Associate Professor	EMBO Award
2016	Prof. Sudhakar Panda (NISER)	Director	JC Bose Fellowship Award
2016	Dr. Amaresh Jaiswal (NISER)	Assistant Professor	DST Inspire Award
2016	Dr. Palok Aich (NISER)	Assistant Professor	Honorary Diploma from VARNA Medical University Bulgaria
2016	Dr. B.N. Pandey	Associate Professor	International Recognition, Secretary, Asian Association of Radiation Research
2016	Dr. Hari Sharan Mishra	Professor	Fellow of the National Academy of Sciences, India
2016	Y V Nancharaiah	Associate Professor	Homi Bhabha Science Technology Award
2016	Prof. V.P. Venugopalan	Professor	ELSEVIER Outstanding Reviewer Award
2016	Dr. Brija Shankar Patro	Associate Professor	DAE "Scientific Technical Excellence Award"
2016	Dr. A.K. Tyagi	Professor	Metallurgist of the year, Ministry of

			steel, GOI
2016	Dr. R. K. Vatsa	Professor	Bronze Medal of CRSI
2016	Dr. Shilpa N. Sawant	Associate Professor	DAE "Scientific Technical Excellence Award"
2017	Dr. Prabhat Kumar Singh	Assistant Professor	Member, Indian National Young Academy of Sciences (INYNAS), Associate of Indian Academy of Sciences (IASc), Bangalore, National Academy of Science, India (NASI) Young Scientist Award, Scientific Planet Society (SPS) Young Scientist Award,
2017	Dr. Sharmila Banerjee	Professor	Homi Bhabha Memorial Oration Award, Indian College of Nuclear Medicine
2017	Dr. Gautham Menon	Professor	Awarded Outstanding Reviewer Award Reports on Progress in Physics (2016), for 2017, by the Institute of Physics, UK for This award recognizes the high quality and timeliness of the awardees reviews for Reports on Progress in Physics. This award is
2017	Dr. Nagaraj D.S.	Professor	Awarded Fellow, for 2017, by the INSA.
2017	Dr. Raghavan K.S.	Professor	Awarded Fellow, for 2016, by the National Academy of Sciences, Allahabad.
2017	Dr. Areejit Samal	Professor	Awarded Max Planck Partner Group, for 2016, by the Max Planck Society (MPG).
2017	Dr. A. S.	Professor	The Japanese

	Bhasikuttan		Photochemistry Association Lectureship Award for Asian and Oceanian Photochemist Sponsored by Eikohshaby Japanese Photochemistry Association, and Professor Suresh C Ameta Award for the year 2016, Indian Chemical Society.
2016	Dr. Rubel Chakraborty	Professor	Dr. P. N. Pathak Memorial Award from the Association of Separation Scientists and Technologists (ASSET), India
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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
MSc	5 Year Integrated	I	07/12/2016	15/12/2016
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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
0	2874	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)

http://www.hbni.ac.in/main/dsp_doc.html?nm=agar/prg_otcm.pdf

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
PHYS04, CHEM04, MATH04,	PhD or DPhil	Physical Sciences, Chemical	219	219	100

LIFE04		Sciences, Mathematical Sciences, Life Sciences			
PHYS13, CHEM13, MATH13, LIFE13, HLTH15, HLTH17	Integrated(P G)	integrated MSc, MSc Physical Sciences, Chemical Sciences, mathematical Sciences, Life Sciences, Nursing, Clinical Research	127	124	98
HLTH09	MD	various spec ilizations	91	106	95
HLTH16	PG Diploma	Fusion Imaging Technology	11	11	100
HLTH10	MCh	Various spec ializations in Health and medical Sciences	20	20	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)

http://www.hbni.ac.in/main/dsp_doc.html?nm=agar/stud_stsftn.pdf

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
International	Dr. Sarmistha Bhattacharya, VECC	Indo French Collaborative Project under CEFIPRA	13/02/2017	Indo French Centre
International	Dr. Gopal Mukherjee, VECC	Coordinated Research project	12/09/2016	IAEA
National	Dr. Milan Kr Sanyal, SINP	JC Bose Fellowship	19/01/2017	DST, Govt. of India
National	Pijushpani Bhattacharjee,	Raja Ramana Fellowship	23/02/2017	DRDO, SLRB

SINP

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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
DAE Fellowship for PhD programmes	5	Department of Atomic Energy
DAE Fellowship for Research Associate (Post Doc)	2	Department of Atomic Energy
UGC CSIR Fellowship for PhD programmes	5	UGC CSIR, MHRD

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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	1095	DAE	55242	55242
Minor Projects	1825	DAE UGC CSIR, DST	4316	4316
Any Other (Specify)	1095	Pharma companies, NGOs	671	671

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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
Workshop on Technology Development of Superconducting Radio Frequency Cavities (SCRFWS2017)	RRCAT ENGINEERING SCIENCES	19/12/2016
DAE Experience with IP Presentation	IGCAR ENGINEERING SCIENCES	20/03/2017

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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
S.N.Bose Medal, 2015 from INSA, New Delhi.	Prof. J. Maharana	INSA	10/05/2016	Faculty
NASI SCOPUS Award for 2016 Physics Category.	Dr. Sanjib Kumar Agarwalla	NASI	20/06/2016	Faculty
EXCELLENCE IN SCIENCE,	Dr. K. Bindra (RRCAT)	DAE	16/10/2017	National Researcher HBNI

ENGINEERING AND TECHNOLOGY AWARD				Professor
EXCELLENCE IN SCIENCE, ENGINEERING AND TECHNOLOGY AWARD	Dr. J.A. Chakera (RRCAT)	DAE	16/10/2017	National Researcher HBNI Professor
EXCELLENCE IN SCIENCE, ENGINEERING AND TECHNOLOGY AWARD	Dr. J. Jayabalan (RRCAT)	DAE	16/10/2017	National Researcher HBNI Professor
ECRP EVONIK Research proposal award	Dr. C. Gunanathan (NISER)	NISER/ EVONIK	21/08/2017	HBNI Associate Professor
JC Bose National Fellowship Fellow of National Academy of Sciences and Utkalmani Yuva Pratiba Samman	Prof. Bedangadas Mohanty (NISER)	DST	19/10/2017	Research Innovation
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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
na	na	na	na	na	31/12/2017
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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
Chemical Sciences	40
Engineering Sciences	46
Life Sciences	38
Mathematical Sciences	19
Physical Sciences	75

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	Scopus (publications in Engineering Sciences, Chemical Sciences, Physical Sciences,	2513	4.6

Mathematical
Sciences, Medical
and Health
Sciences, Life
Sciences and
Interdisciplinary
fields)

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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
Engineering Sciences, Chemical Sciences, Physical Sciences, Life Sciences, Medical and Health Sciences and interdisciplinary fields (2016)	255
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3.4.4 – Patents published/awarded/applied during the year

Patent Details	Patent status	Patent Number	Date of Award
K. P. Muthe, M. S. Kulkarni, Anuj Soni, Ajay Singh, N. S. Rawat, D.,R. Mishra, Mrs. Ratna Pradeep, S., Bhattacharya, D. N. Sharma, S. K. Gupta A method for largescale synthesis of optically stimulated luminescence grade polycrystalline ceramic material	Published	9523033	20/12/2016
A flexible magnetic membrane based actuation system and devices involving the same USA	Published	9579434	28/02/2017
Dr. Vikas Jain, Mr. Girdhar Mundra, Dr. Satish Chandra Joshi, Dr. P. D. Gupta A method and device for tuning SCRF Cavity Europe	Filed	15712694.7	05/05/2016
Deepak Sharma, S. Santosh Kumar, Rahul Checker, Raghavendran S. Patwardhan, Sundarraaj	Filed	094679	08/04/2016

Jayakumar, Preethi Sasi and Subrata Chattopadhyay (Radiation Biology Health Science Division, BARC) and Vikram Gota (ACTREC) A Method of adjuvant treatment with Chlorophyllin containing therapeutic preparation including for Radioprotection of normal tissues during radiation therapy and kit thereof			
R. K. Singh System comprising Sun Ray Collimating Central Mirror and Heliostat to increase efficiency	Filed	052056	12/04/2016
Bikram Roy A pH Measurement System for Slurries in Batch Application	Filed	2017210047	09/02/2017
Rachna Dave, Hiren M. Joshi, Anupkumar Bhaskarapillai, V. P. Venugopal A Method for preparing Chlorinedioxide releasing polymer	Filed	21010449	28/03/2016
J. Aparna and P. K. Vijayan, RED, BARC A System, a Device and a Method for Passive Decay Heat Transport	Filed	050235	19/01/2016
J. Aparna and P. K. Vijayan A System, a Device and a Method for Passive Decay Heat Transport	Filed	16704275.3	15/03/2017
Ravin Kumar Dayal, Natrajan Parvathavarthini, Baldev Raj (IGCAR) Swetha Mulki, Indradev Samajdar (IIT, Bombay) India	Published	272698	20/04/2016

Process for Development of a High resistance Austenitic Stainless Steel			
M. Jayakumar, K.A. Venkatesan, T.G., Srinivasan, and P.R. Vasudeva Rao A novel method of Synthesis of Rhodium Metal Foam using room temperature ionic liquids	Published	279100	11/01/2017
C. Babu Rao, C. Pandian, Jayakumar T, Baldev Raj India Single Fibre grid with improved spatial resolution in distributed optical fibre sensor system	Published	280741	11/01/2017
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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
web of science publication	Faculty of HBNI, CIs and OCC	web of sciences	2016	4.01	HBNI CI and OCC	17523
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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
web of science publications	Faculty of HBNI CIs and OCC	web of science publications	2016	75	17523	HBNI CIs and OCC
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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	205	88	0	0
Presented papers	200	88	0	0

[View File](#)

3.5 – Consultancy

3.5.1 – Revenue generated from Consultancy during the year

Name of the Consultan(s) department	Name of consultancy project	Consulting/Sponsoring Agency	Revenue generated (amount in rupees)
Institute of Plasma Research (IPR)	IPR for Transfer of Technology	Public Sector in Pharma sector	200000
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3.5.2 – Revenue generated from Corporate Training by the institution during the year

Name of the Consultan(s) department	Title of the programme	Agency seeking / training	Revenue generated (amount in rupees)	Number of trainees
na	na	na	0	0
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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
School and Conference on Quantum Disordered Systems	IMSc	10	80
Conference on Frontiers in High Energy Physics II	IMSc	5	50
Science at the Sabha	IMSc	20	1200
Network Theory Conceptual Advances and Practival Application (NCAP2016)	IMSc	10	50
Summer Internship Programme in Mathematics	IMSc	15	80
Atomic Energy Nuclear Science an orientation	IoP	10	200
Role of Atomic Energy Nuclear Power in the Service of Mankind	IoP	20	157
Nuclear Technologies for betterment of Tribals life	IoP	10	300

Sundarban Krishi Mela O Loko Sanskriti Utsab	SINP	15	500
Jatiya Sanhati UtsavO Bharat Mela 2017' - a National Level Science, Technology, Space, Atomic Energy Mass Awareness exhibition and seminar	SINP	17	500
Blood Donation Camp	Research Fellow Association, SINP with the Association of Voluntary Blood Donors, West Bengal	5	100
IANCAS (Southern Chapter IGCAR)	IGCAR	15	1500
SAC SC (IGCAR)	IGCAR	10	250
Orientation on DST INSPIRE	IGCAR	5	200
BRMB NDE	IGCAR	3	20
Orientation programme IIM BITS STIPAC	IGCAR	15	200
VECC : Celebration of National Science Day on the theme "Make in India: ST driven innovations"	VECC	10	200
Outreach programme at Ankhona High School, Burdawan	VECC	9	150
Acharya Satyendranath Basu Smarak Bijnan 'O' Prajukti Mela, January 1924, 2016	VECC	10	200
Celebration of National Technology Day on the theme "India is selfsufficient in producing nuclear power as a greener alternative source"	VECC	25	300
Visit to cyclotrons at VECC and other laboratories	VECC in participation with Sri Sri Academy, Shantipur college, La Martinier Boys' School	20	250

Enriching Collegiate Education (TEW2016)	IMSc	5	250
Enriching Collegiate Education II	IMSc in association with NCM	5	150
2nd IMSc School on Quantum Information	IMSc	5	100
CSPathshala Teachers Workshop	IMSc	10	250
IndoFrench Conference in Mathematics	IMSc	8	47
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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
Implementation of Official Language	Rajbhasha Shield	Department of Atomic Energy	20
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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/Agency/collaborating agency	Name of the activity	Number of teachers participated in such activities	Number of students participated in such activities
Celebration of National Science Day on the theme "Make in India: ST driven innovations"	VECC	Science day celebrations	10	60
Outreach programme for School students	VECC	Science Outreach	5	100
Cleanliness drive of campus hostel	VECC	Clean Campus drive	2	15
Blood Donation Camps	VECC	Blood donation camps	2	40
Plantation drive	BARC	Green Campaign	5	60
Plantation drive	IGCAR	Green Campaign	5	40
Tree Plantation	RRCAT	Green Campaign	2	20
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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
Advanced Courses in Engineering at IITBombay, IITMadras	Students of PhD in Engineering Sciences	DAE HBNI	180
Research exchange	Faculty of CIs/ OCC on theme based research	National and international institutions	3
Research and faculty exchange	Faculty of various CIs/ OCC	Respective CIs/ OCC and participating institutions national and international research schemes in the theme areas	3
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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
Training internship for UG, PG PhD students (in BARC)	Short term project interns (short project work in relevant areas)	Indian Science Academies	15/11/2016	27/02/2017	60
Summer Training and projects in BARC	Summer Training in relevant areas in BARC	Universities , National Institues	15/05/2017	26/07/2017	1247
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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
IIT Bombay, Mumbai	17/04/2017	Academic collaboration for course works	22
IIT Madras, Chennai	17/05/2017	Academic collaborations for academic courses	6
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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
15500	15173

4.1.2 – Details of augmentation in infrastructure facilities during the year

Facilities	Existing or Newly Added
Campus Area	Existing
Class rooms	Existing
Laboratories	Existing
Seminar Halls	Newly Added
Classrooms with LCD facilities	Newly Added
Video Centre	Existing
Number of important equipments purchased (Greater than 1-0 lakh) during the current year	Newly Added

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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 partially)	Version	Year of automation
LIBSYS	Partially	7	2016
KOHA	Partially	17.11.11.000	2017

4.2.2 – Library Services

Library Service Type	Existing		Newly Added		Total	
Text Books	277180	409483032	3021	5327771	280201	414810803
Reference Books	12248	53250947	67	452000	12315	53702947
e-Books	36199	86185728	1715	6472486	37914	92658214
Journals	16005	3638003584	232	232164358	16237	3870167942
Digital Database	494	85289360	78	15374050	572	100663410
Library Automation	1	3737936	0	2224783	1	5962719

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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
Prof. Ashoke Sen	Lectures in Video,	www.youtube.com/ash	20/12/2016

[View File](#)**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	21348	8	3200	80	16	80	88	1000	0
Added	800	2	320	5	2	5	0	0	0
Total	22148	10	3520	85	18	85	88	1000	0

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

1000 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
AudioVideo Recording facility available in IPR, Seminar Hall to record Talks and Colloquiums	https://ipr.res.in
25 seater multifunctional mini studio facility is established in 2015 which handles video conferencing, web streaming, video recordings and meetings (IMSc)	https://ekalavya.imsc.res.in/
Media Center encompasses a soundproof broadcast quality mini studio for recording educational videos using PTZ Cameras, video recorders, A/V Mixers, Video Editing, Video Conferencing	https://youtube.com/imsc

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
14500	14245	27500	27255

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)

The HBNI and the Constituent Institutions/ Off Campus Centre are established by the Govt. of India through the Department of Atomic Energy. The academic buildings, laboratories, resources such as IT computer centre, classrooms, ICT labs, sports complex, residential facility for faculty, staff and students are the facility established following the procedures of the Govt. of India and such statutory bodies. Accordingly the maintenance and the physical facilities are under their purview, the DAE allocated budgets directly for the respective activities. The resources relating to ICT, campus infrastructure for academic

and related activities are part of the major RD activities of the CIs/ grant in aid to the respective institutions following the govt. norms. Where specific facilities such as e governance peripherals are purchased, installed and maintained following due procedures of the Govt. of India. It is estimated that approximately 12 percent to 15 percent of the total cost of equipment, devices, computers, peripherals are spent on annual maintenance across all the institutions, where applicable, replacement of spares is undertaken as per the maintenance policies of the institutions. All the facilities available in the CIs is available across all the CIs/ OCC for carrying out experimental and theoretical work. For utilizing these facilities from other CIs/ OCC a communication to the in charge of the lab are made through formal and informal for use of such facilities. Some facilities are for central use of all scientists across the CIs/ OCC, The Electron Microscope facility of SINP is working as a central facility and equipped with a 200 keV Transmission Electron Microscope and a 300keV Field Emission Gun Transmission Electron Microscope. The facility caters to the researchers from diverse disciplines like Biological Sciences, chemical sciences and engineering sciences. Researchers utilize some of the facilities like Indus I and II, which are very unique and they are used by almost all the CIs/ OCC and other instituted in India, who also use the facility for study of biological samples like bacteria their thin section, lipid vesicles, detergent micelles, lipid protein complexes, peptide aggregation etc.

www.hbni.ac.in

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	JRF SRF other Scholarships for all CIs/ OCC of DAE for various programmes	1667	68412000
Financial Support from Other Sources			
a) National	UGC CSIR ICMR	33	1190000
b) International	na	0	0

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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 implemetation	Number of students enrolled	Agencies involved
Course on Communication Skills for Scientists and Engineers	13/03/2017	35	RRCAT IITKanpur
Yoga Meditation	22/03/2017	12	RRCAT with support of Yoga Circle Indore
Bridge Course on Nondestructive	21/03/2017	30	IGCAR, Indian Society for NDT

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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	National Scheme of Support for needed students	15	15	7	7

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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
2	2	22

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	0	0	na	0	0

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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	160	HBNI CIs/ OCC	Physical Sciences, Chemical Sciences, Mathematical Sciences, Life Sciences, Medical and Health Sciences	various universities in national and international institutions for Post Doc and higher education	Masters, PhD and Post Doc positions

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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
GATE	8
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5.2.4 – Sports and cultural activities / competitions organised at the institution level during the year

Activity	Level	Number of Participants
RRCAT Mini Marathon	All staff Students	60
HBNI RRCAT Research Scholar Day	Research Fellows and Scientists	50
IoP DAE Sports and Cultural meet	All staff and students	60
NISER Udbhava Annual Cultural meet	Students and Faculty	150
NISER Umang Intra College Cultural Fest	Students and faculty	160
NISER Udgaman Intra College Sports Meet	Students and faculty	160
SINP Hindi Day celebration including week long competition on hindi recitation, song, story writing etc.	College students, Research fellows Faculty	200
SINP Annual Cultural Programme including performance by students, faculties and other employees	College students, Research fellows Faculty	200
SINP Annual Sports: Chess, Carrom, Cricket, Football	College students, Research fellows Faculty	200
BARC All India Inter Institutional Kabaddi Tournament 810 May 2017	Students Scientist	30
BARC Table tennis Tournament 1417 April 2017	Students Scientist	30
BARC Inter Group Rink Hockey tournament 1719 March 2017	Students Scientist	100
BARC Annual Bridge Tournament 18 March 2017	Students Scientist	100
BACR Ball badminton tournament 2526 March 2017	Students Scientist	100
BARC InterDivision Football Tournament 2426 Feb 2017	Students Scientist	100
BARC InterDivision cricket Tournament	Students Scientist	100

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	DAE National Swimming Competition	National	1	0	PHYS04201404003	Soumik Bhattacharya
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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)

HBNI in its endeavor to provide effective and transparent functioning of the academic and academic related activities have constituted functional bodies/committees to undertake the delegated functions. Students are represented in all such bodies to seek views of the students and their matters. For the purpose of academic activities students are represented in Student Grievance Committees (at the CI levels), Internal Quality Assurance Cell, Placement and Alumni Cell. In order for the functioning of cultural and outreach activities, each of the CI/ OCC have Student Cultural Committees, which organize and conduct national festivals, environmental and health awareness campaign, swachata abhiyan, outreach activities such as blood donation camps, awareness campaign. Students of HBNI and CIs/ OCC participate in various sports, cultural, library, nature clubs and such other committees. They organize annual events, sports and cultural as per their academic calendar. All support is being extended to them for organizing such events through student mentors and Dean Student Affairs PhD Guides. Each of the CIs have indoor games, sports and cultural clubs which organize such events within the campus. The students are engaged in annual hostel day celebrations, institute day, swachata abhiyan, clean campus campaign, new year eve celebrations, Ganapathi Utsav, colloquium on science topics, health matters, popular science talks, invites lectures on Science Day, Yoga Day, Republic day, Independence Day, Literary Club, Dance, Drama and Film club and such other events. The students in all the CIs/ OCC are actively engaged in the national/ international level scientific forums, meeting and conferences for exchange of ideas and theme based research. They are generally mentored and guided by the Dean(s) Academic, , PhD guides. Clean Green Campaign in the CIs: The students of PG level are engaged in Swachata Abhiyan, planting tree sapling on the notified days of the year to commemorate their contributions to the country. These activities help inculcate a habit for conservation of environment and natural resources. All the students of the CIs take this initiative annually. Promotion and Popularization of Science Education Programmes by students of CIs: A large number of students in the CIs actively participate in training and education programme to the undergraduate and post graduate during the summer vacation and regular projects during the final year of the science programme being pursued by students of other university, colleges etc. They even train students for 1 year project leading to preparation of a project report in the chosen topics. The number of such trainee students are in large numbers to the extent of more than 200 to 1000. Select CIs also conduct summer students visitor programme for a duration of 6 weeks, students sponsored and supported by INSA also take part in such activities. The students are also engaged in organizing popular science lecture

for school students either within the CIs or in their school campus. National Science Day/ National Technology Day: The students in the CIs are actively engaged in National Science Day and National Technology Day programme celebrated as per their programmes.

5.4 – Alumni Engagement

5.4.1 – Whether the institution has registered Alumni Association?

Yes

One of the CI of HBNI has a Alumni Association registered.

5.4.2 – No. of registered Alumni:

74

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

600000

5.4.4 – Meetings/activities organized by Alumni Association :

Meetings of the Alumni Association organized as per Institute plans. SINP a CI of HBNI conducted Alumnus meeting on 14.12.2016, where in 22 alumnus students participated. Around 18 alumnus of HBNI met in IoP during an annual meet as part of Indian Association of Nuclear Chemists Allied Scientists, Eastern Regional Chapter at Bhubaneswar.

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)

The organizational structure of HBNI is indeed truly decentralized. The responsibilities for selection and admission of students, payment of fellowships, guidance and monitoring of progress of students, redressal of grievances of students, organization of exams and other such activities are under the purview of the CI/OCC. The Director of the CI/OCC provides overall guidance to the academic programs at the CI and sets up necessary committees for the design and implementation of the academic programs with complete academic rigour. A Standing Academic Committee is set up at each CI that prescribes the course work for the students and also forms the Doctoral Committee. Every CI/OCC has one or more Deans (Academic), depending on the disciplines handled by the CI/OCC, and one Dean(Student Affairs) and a Nodal Officer who handle all the academic Governance and students' welfare activities. Participative Management: The Academic Council of HBNI has, as its members, Directors of all the CIs/OCC as well as Convenors and Co convenors of Boards of Studies. Deans(Academic) are invitees to the meetings of the Academic Council. All major decisions on academic programs and processes are arrived at by discussion in the Academic Council with participation of all important functionaries of HBNI. This has ensured that the institutions are able to meet their individual objectives and at the same time, adhere to a common set of academic standards and processes. Similarly, the Standing Committee of Deans (SCD) of HBNI, chaired by Vice Chancellor, has as its members Deans(Academic) and Deans (Student Affairs) of all CIs and OCC. The finer aspects of academic governance are discussed in detail in the meetings of SCD. Case Study: Revision of Ordinances of HBNI The Ordinances of HBNI, which govern the conduct of all academic programs, were formulated in 2013. Subsequently, based on the decisions taken by Academic Council and other bodies on various topics, guidelines were issued to students, faculty as well as CIs/OCC. These guidelines covered a number of important issues and during last year, it was

decided that the ordinances need to be revised to incorporate all the guidelines and provide them a statutory base. Also, considering various developments in the field of higher education, and guidelines issued from time to time by bodies such as UGC, many changes had to be made in the ordinances. Further, ordinances had to address new courses which were started in the intervening period. Considering the comprehensive changes required, the ordinances were first drafted through several detailed deliberations within the Central Office. These were, then discussed in meetings of the Standing Committee of Deans, where Deans (Academic) from all CIs and OCC participated and shared their views. The ordinances were then discussed in the Academic Council, where the Directors of CIs/OCC as well as academic experts from outside HBNI provided a number of important inputs.

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
Curriculum Development	<p>The university follows a systematic process for the design and the development of curriculum for various academic programmes, which are explained below. The curriculum development for MTech/ MSc (Engg)/ MPhil is carried out by a subcommittee of experts constituted for this purpose by the subject specific Training School Committees (TSC). The TSCs basis their recommendations on evolution of DAE programmes during the period since the last review and feedback from students. The revised syllabus incorporating the recommendations of the TSC is then forwarded to the Board of Studies (BoS) of respective discipline for the ratification of the suggestions and recommendations. The recommendations of the BoS is placed in the Academic Council for ratification and approval. This process is carried out once in three years on a holistic basis.</p> <p>However, minor modifications if required are carried out on a case by case basis in an ongoing manner and duly ratified in the meetings immediately following the revision by the above committees as state above.</p> <p>DipRP/ DMRIT/ DFIT These programmes come under Board of Studies in Medical and Health Sciences. Any revision to the syllabus is approved first by the standing committee and then by the BoS.</p> <p>MD/ MCh/ DM The conduct of these programmes including any revision of syllabus is managed by the Board of Studies in Medical and Health Sciences</p>

and the guidelines of the Medical Council of India. The BoS meets periodically and deliberates on the recent trends, development and recommends introduction of new specializations that may be needed to generate manpower in the specialized medical field. MSc (Nursing) Conduct of this programme including any revision of syllabus is governed by the Board of Studies in Medical and Health Sciences and the guidelines of the Nursing Council of India. PhD and Integrated PhD: The course work is designed and approved by CI level discipline wise academic committees and approved by BoS. Additionally, Student specific doctoral committees look into the requirements of individual students and prescribe additional courses which have to be taken as self study courses. Syllabi for such courses are tailor made. With regard to the MSc as part of the programme, the curriculum is designed by the discipline wise committees constituted by Director of CI/ OCC based on the current national and international trends in Masters level education in Physics, Chemistry and Mathematics. It is then run through Board of Studies and their feedback is incorporated before finalizing the curriculum. Student feedback is taken both during the course as well as at the end of the course and based on the feedback the required changes in the course curriculum, research methodology and examination system is made for effective learning of the subject. The feedback process is monitored and implemented by the Graduate committee of the Institute. MSc (5Year Integrated) This programme is conducted only at NISER. The course structure of the programmes is designed by the experts consisting of eminent scientists in the field and frozen for a minimum of 3 years. The syllabus for individual courses in any program is proposed by the faculty and submitted to the Under Graduate Committee of the BoS (UGCS) of the respective school. It is discussed and sent to Undergraduate Committee of the Institute (UGCI) and then sent to the BoS. The BoS of the CIs of NISER meets once in every 3 months to ratify the above. Finally, it is discussed and approved by the Board

	of Studies of CI and Academic Council of HBNI.
Teaching and Learning	<p>Doctoral students are encouraged to enrich themselves by taking up courses beyond mandatory one year of course work to broaden their knowledge. Such courses could be in the form of self study courses, open seminars or minor RD project. Similarly, MTech, students during one year course in training school are given mini projects to be carried out under the guidance of senior scientists. The project work is evaluated by a committee. The evaluation procedure includes a presentation by the students also visit various nuclear installations as a part of their course work. Students from Health Sciences practice in hospitals as a part of their academic programs. Viz. MD/ DM/ MCh/ Nursing etc.</p>
Admission of Students	<p>A meritocratic admission policy with predefined minimum standards are followed. It has two steps as follows i. National level test (On line or Offline) ii. Interview by a Committee appointed by Head of the CIs/OCC. For different courses number of number of examination centres is different. For low applicant/ intake capacity, the examination centre is mainly at the CIs. For high applicant/intake capacity, the examination centres are at National level.</p>
Library, ICT and Physical Infrastructure / Instrumentation	<p>The library, ICT and related infrastructure including the RD equipment instrumentation already available in the CIs/ OCC are latest technology based and as available in the best institute in sector. The Libraries are equipped as per latest specifications and every effort has been made to make available e journal, digital scientific publications on the click of the mouse for the students and faculty to access at all times. All the labs, student residences are wifi enabled which allow students to access such information as per their time and duration. On ICT enabled resources, HBNI has facilitated making available the NPTEL, SWAYAM and e pathshala the virtual lectures and technology enabled lectures on DAE network for easy access, benefiting the students. To make self study a practice, the HBNI Ordinance also allow sourcing such</p>

courses and earn credits on self learning basis. All the RD centres/ Units within the CIs/ OCC have state of art lab equipment and instrumentation for undertaking research in the specialized fields. The research fellows have option to undertake/ conduct part of the research in one or more of the research establishments as part of the thesis. Similarly, students of the medical and health sciences practice in a hospital as part of their PG and research programmes.

6.2.2 – Implementation of e-governance in areas of operations:

E-governance area	Details
Finance and Accounts	Use of such software for accounting as per govt. of India guidelines are followed. HBNI is following the govt. of India s guidelines for the application of such software and processing of student matters including the Foreign Travel Assistance.
Student Admission and Support	Online fee payment has been introduced from the previous year. All students have access to the online portal for fee payment. This is also as per the policy of the Govt. of India s digital initiative.
Examination	CIs/ OCC are conducting online examination as per the applicable procedures and regulations of the BoS.

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
2016	All faculty of HBNI	Various national and international conferences organized within India in association with Universities and faculty participating in International scientific meets, symposium	All scientific and professional bodies in India and international scientific foras	20000000

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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	Scientific project Management (IGCAR)	Workshop on Quality in Scientific projects	16/01/2017	27/01/2017	20	0
2016	Scientific project management (IMSc)	Annual Quality in Scientific projects	11/12/2016	12/12/2016	5	0

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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
Managing Innovation and Technology for Competitiveness	2	16/01/2017	27/01/2017	10
General management programme for women scientist	5	02/01/2017	13/01/2017	10
Emotional Intelligence at Work place for scientist and technologist	4	23/01/2017	03/02/2017	10

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

Teaching		Non-teaching	
Permanent	Full Time	Permanent	Full Time
38	0	0	12

6.3.5 – Welfare schemes for

Teaching	Non-teaching	Students
The campus in the R and D Centres of the CIs/ OCC are provided with	The campus in the R and D Centres of the CIs/ OCC are provided with	All the campus have own hospitals, student Centres and activities as

residences for majority of the staff and faculty. These government accommodations are in the vicinity of the Institutes. There are welfare schemes for medical as per the government regulations, guidelines, including their family is covered under the Contributory Health Services Scheme. A family welfare scheme following the government of India is also applicable to them. The campuses have schools for kids of all faculty and staff members. Recreational facilities, yoga room, indoor games facilities, and student focussed cultural activities form part of the campus life for teachers and staff.

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per the plans of the institute. Students have access to these facilities as per their needs and choices.

6.4 – Financial Management and Resource Mobilization

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

HBNI academic and related activities are audited as per the statutory functions. The Planning and Monitoring Board of HBNI reviews the academic plans envisaged for the year and reviews the progress made in the previous year. The Planning and Monitoring Board also advice on the future vision, directions and road map for all the academic activities. As per the statutory provision, statutory auditor for financial procedures and process are undertaken. The Finance Committee also recommends the statutory provisions for the institute and the recommendations are placed before the Council of Management for concurrence. Thus the Council of Management serves as an apex body for the institute functions and activities.

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
Various Trusts, Corporate houses, Pharma cos and such other institutions having interest in Oncology research	785587596	Research, Development, drug testing, development and benefits of diagnosis and treatment
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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	Yes		Yes	The Planning Monitoring Board reviews the academic and related activities, the Academic Council along with the peer members also review the recommendations of the BoS and related activities.
Administrative	Yes		Yes	The Financial audit is undertaken as per the statutory needs. The Finance Committee reviews the financial needs, requirements and the recommendations are placed before the Council of Management for ratification, which reviews the processes and precedures.

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

not applicable

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

The programmes offered in the CIs are at the post graduate level and primarily the interaction with the parents of the students happen as per needs and demands, as the CIs are dealing with matured students who are capable of putting their perspective as per the requirements. Efforts through Alumni are also made to actively interact with parents.

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

The support staff are guided to undertake short courses conducted by the Govt. of India institutions and ATI, Mumbai in a variety of areas such as RTI,

purchase procedures, managing the staff personal matters as per the rules and regulations of the govt. of India announced time to time, and education management courses conducted by IIMs etc. with the aim to upgrade their skills and knowledge in office management. Emphasis is also made for use of Hindi typing and office management purposes.

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

1. Introduction of new courses as per demand having emphasis on employability
 2. Student Centric Initiatives including digital initiatives for online fee payment, streamlining the academic progress and their processes
 3. Institution Digital Initiatives covering recording of lectures and making available in the form of e lectures for access to all, providing NPTEL based courses and SWAYAM courses as part of main courses.

6.5.6 – Internal Quality Assurance System Details

a) Submission of Data for AISHE portal	Yes
b) Participation in NIRF	Yes
c) ISO certification	Yes
d) NBA or any other quality audit	Yes

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
2016	Sensitization of all Deans, Conveners and CoConvenors of Academic personnel in CIs/OCC	07/11/2016	07/11/2016	07/11/2016	40
2017	Quality Workshop on Curriculum Revision and other Quality Initiatives and Meeting of the Standing Committee of the Deans of all CIs/ OCC	18/07/2017	18/07/2017	18/07/2017	45

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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
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			Female	Male
Sexual Harassment and Gender Justice" by Ms. Sudha Ramalingam, Senior Advocate, High Court of Madras	21/07/2016	21/07/2016	70	70
"Women as Mentors and Pillars" by Ms. Kirtanya Krishnamurthy, CEO, Mind Fresh Training Academy, Chennai,	14/03/2017	14/03/2017	75	75
Women in the Changing World of Work" by Dr. Rita John, Professor and Head, Department of Theoretical Physics, University of Madras,	21/03/2017	21/03/2017	75	75

7.1.2 – Environmental Consciousness and Sustainability/Alternate Energy initiatives such as:

Percentage of power requirement of the University met by the renewable energy sources

The contribution of power requirement met by renewable/ alternate energy sources: All the CIs/ OCC have implemented the Govt. of India regulations to meet the power/ energy requirement using solar energy, alternate energy systems as per the norms. CIs accordingly have set up solar panels for power generation to meet the institutional energy needs. Clean Green Campaign: All the CIs/ OCC are following the Government of India guidelines and have implemented generation and utilization of renewable energy sources. Each CI/ OCC have adopted the use of renewable energy as per the policies, accordingly budgets were made available. All the students in the Constituent institutions are engaged in Swachaata Abhiyan, tree planting in the campus and common places in their regions to commemorate notified days which have direct contribution to SDGs. These activities helped students inculcate a habit for conservation of environment and natural resources. All institutions of DAE are extremely conscious about environment as can be seen from the greenery in the campuses. At Trombay campus of BARC, a Nisurgaruna plant has been operating to generate and process waste generated in the kitchen. It generates cooking gas and manure. A water harvesting scheme has also been implemented in the Trombay campus. For disposal of hazardous chemical waste, a plant has been set up in BARC. The chemistry laboratories encourage use of 'green chemistry' methodologies. Similar to BARC, another Nisurgaruna plant to process kitchen waste is installed at RRCAT Indore. Tree planting and growing of flowers is given special emphasis on all campuses and this has resulted in beautiful ambience in the campuses. Tree cover attracts birds. Greenery of IoP attracts hundreds of migratory birds every winter enroute to Chilka lake of Odisha. As

part of environmental monitoring programme, studies on physio chemical, biological and geo chemical characteristics of coastal environment (water, biota and sediment) were conducted at IGCAR to meet MoEF regulation. Results of studies on biofouling organism, phytoplankton, zooplankton and fish diversity in the coastal water indicated high diversity and high density indicating the healthiness of the Kalpakkam coastal environment. Among antifouling paints screened, one was found suitable for use at MAPS water intake gate. Results of studies on dissolved heavy metal in Kalpakkam sea water indicated that the coastal water is not polluted with heavy metals. A new fish species to the world of fishery science has been identified and named as Scolopsis igcarensis, in recognition of IGCAR's contribution to marine diversity study. Water quality studies on ground water samples from Kalpakkam region were carried out for fluoride and nitrate content, fluoride content were below permissible limit, however, nitrate contents were beyond the limit in some of the areas.

7.1.3 – Differently abled (Divyangjan) friendliness

Item facilities	Yes/No	Number of beneficiaries
Ramp/Rails	Yes	7
Provision for lift	Yes	7
Physical facilities	Yes	7

7.1.4 – Inclusion and Situatedness

Year	Number of initiatives to address locational advantages and disadvantages	Number of initiatives taken to engage with and contribute to local community	Date	Duration	Name of initiative	Issues addressed	Number of participating students and staff
2016	2	2	14/11/2016	1	Gender Sensitization on Equal Opportunities in Govt Service (IMSc)	Gender, Equality	5
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7.1.5 – Human Values and Professional Ethics Code of conduct (handbooks) for various stakeholders

Title	Date of publication	Follow up(max 100 words)
Code of Ethics for publications in all CIs/OCC	08/05/2017	The researchers at all levels pursue scientific and technological activities in a harmonious and fair atmosphere. The research and development activities carried out in all CIs/OCC, result in publications of papers reports in national/international journals, newsletters, newspapers,

conferences, symposia, seminars and workshops. Reputation of the institute and the credibility of the scientific research, rest on the quality and integrity of our publications. Hence, it is important to adhere to the highest ethical standards while publishing research work. All Scientists in all CIs/ OCC owe it to themselves, their colleagues, their institute, the society and the world scientific community at large to scrupulously abide by a Code of Ethics in letter and spirit. This Code of Ethics is applicable to all Scientific / Technical publications where one or more of the authors are affiliated to BARC. Papers or articles in journals, conferences, seminars, workshops, symposia, newsletters, etc. M. Tech./ PhD Thesis etc. Reports, monograms, books etc. All serving scientists/ researchers are required to abide by this Code of Ethics. It is also applicable to those scientists who are enrolled as students of HBNI/other universities. Wherever there is a conflict or overlap between this Code and prevailing rules, the provisions of the rules will apply.

7.1.6 – Activities conducted for promotion of universal Values and Ethics

Activity	Duration From	Duration To	Number of participants
Awareness and Sensitization of Deans Academic regarding the Ethics policy of DAE and HBNI	07/11/2016	07/11/2016	40

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7.1.7 – Initiatives taken by the institution to make the campus eco-friendly (at least five)

All CIs/ OCC of HBNI are extremely conscious about environment carbon footprint, as can be seen from the greenery in the campuses. In the Trombay campus of BARC, a Nisurgaruna plant has been operating to generate and process the waste generated from the kitchen. It generates cooking gas and organic manures. (i) A water harvesting scheme has also been implemented in the Trombay campus. For disposal of hazardous chemical waste, a plant has been set up at the BARC campus. (ii) The Chemistry laboratories encourage use of 'green chemistry' methodologies. A Nisurgaruna plant to process kitchen waste is installed at BARC, a CI of HBNI. (iii) Tree planting and growing of flowers is given special emphasis on all campuses and this has resulted in beautiful ambience in the campuses. Tree cover attracts birds. Greenery of IoP attracts hundreds of migratory birds every winter when they are on their way to the Chilka lake of Odisha. (iv) As part of environmental monitoring programme, studies on physio chemical, biological and geo chemical characteristics of coastal environment (water, biota and sediment) were conducted at IGCAR to meet MoEF regulation. Results of the studies on bio fueling organism, phytoplankton, zooplankton and fish diversity in the coastal water indicated high diversity and high density indicating the healthiness of the Kalpakkam coastal environment. Among antifouling paints screened, one was found suitable for use at MAPS water intake gate. Results of studies on dissolved heavy metal in Kalpakkam seawater indicated that the coastal water is not polluted with heavy metals. A new fish species to the world of fishery science has been identified and named as Scolopsis igcarensis, in recognition of IGCAR's contribution to marine diversity study. (v) Water quality studies on ground water samples from Kalpakkam region were carried out for fluoride and nitrate content, fluoride content were below permissible limit, however, nitrate contents were beyond the limit in some of the areas. Ambient air quality monitoring at different places of IGCAR was continued to meet MoEF and AERB requirements. (vi) At TMC (Kharghar Campus), a biogas plant is installed that processes kitchen waste. Biological and toxic waste is collected separately for disposal. Vermiculture is practiced on the campus that generates manure. The animal facility has solar heating panels that provide hot water. The campus has several plants and trees having medicinal values.

7.2 – Best Practices

7.2.1 – Describe at least two institutional best practices

(i) Facilitating academic research using advanced experimental facilities available with DAE Institutions (ii) Capacity building in cancer treatment to meet national need

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

http://www.hbni.ac.in/main/dsp_doc.html?nm=agar/inst_bst_prctcs.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

One of the major distinguishing characteristics of HBNI lies in its uniqueness as a research university, imparting knowledge and skills in the areas of nuclear sciences and engineering, in addition to science and engineering disciplines, with a mission to pursue excellence to propel/boost indigenous nuclear and related technological capabilities. Nuclear science and engineering is an interdisciplinary subject and any institute involved in its development

should have expertise in several branches, viz. physical sciences, chemical sciences, life science, engineering sciences, health sciences and mathematics. The eleven institutions under DAE which are the Constituent Institutions (CIs) and one off campus centre (OCC) pursue R D in such domains, taking advantage of their academic strength in specific areas. To pursue research by inquisitive and fresh minds for achieving breakthroughs, the CIs and OCC have established a wide range of facilities ranging from tabletop set up to mega science facilities such as research reactors, accelerators, tokamaks, etc. Computational resources available to faculty and students are quite extensive and faculty are well trained to build own instrumentation and facilities. Doctoral students are from all branches of science and engineering having a relation with nuclear technology. They work on problems related to the mandate and deliver a lot in terms of research output. Increased intake of doctoral students has contributed a lot towards realising the full potential of the research infrastructure available and helped in accelerating the pace of developing indigenous technologies. The success indicators in the advancement of knowledge in nuclear science and technology through research and innovation are illustrated below:

- The publication profile of the University is very impressive in its content and also admirable in terms of its diversity. The average total number of journal publications is around 2300 per year with an h index of the institute is 41.
- The total number of students completing the PhD program per year is around 200 and the same number for M.Tech. is 100.
- A large number of faculty members are Fellows of different academies and have received various awards and recognition for their work including Academic Fellowships, and prestigious Civilian awards.
- Technology control regime is an established practice in the nuclear field. Such embargo has been used as an opportunity to develop advanced tools and experimental facilities indigenously.

The academic programs of HBNI have been able to make a distinctive impact in several domains critical for the advancement of the country's nuclear program. Examples of such important contributions include studies related to the safety of various reactor systems, development of novel materials and development and demonstration of processes that form part of the nuclear fuel cycle. The above examples clearly illustrate the success in academic terms, of the distinctive approach pursued by HBNI.

Provide the weblink of the institution

http://www.hbni.ac.in/main/dsp_doc.html?nm=agar/inst_dstntvns.pdf

8.Future Plans of Actions for Next Academic Year

Homi Bhabha National Institute (HBNI) has significantly contributed to the indigenous development of nuclear science and technology by adding to the knowledge bank in this unique domain, generating valuable human resources and providing useful inputs to mission programs. The academic programs in the area of medical and health sciences have led to a significant addition to the Nation's strengths in medical oncology. The University has a great potential to ramp up its contributions, expand its scope and coverage of programs and provide required human resources for nuclear energy program, comprehensive cancer care, mega science research, research in the frontier areas of science and technology and research and development in key areas that can provide benefits to the society. The plans of actions for the next academic year include

1. Introduction of new programme, MSc Physical Sciences in HRI,
2. Revision of Integrated MSc programmes of NISER (Physical Sciences, Chemical Sciences, Mathematical Sciences, Life Sciences)
3. Revision of Diploma in Radiation Physics as per current needs and development in the field
4. Introduction of many value added courses for MD/ DM programmes of TMC.
5. Revision of courses for PhD Life Sciences at SINP.