INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
Powai, Mumbai - 400076

No. REG/M-1(48)/2021
1st March, 2021

To
Shri P. J. Soundararajan
Under Secretary (IITs)
Department of Higher Education
Ministry of Education
428-C, Shastri Bhawan,
New Delhi – 110015.

Subject: Lok Sabha Unstarred Diary No. 6997: Answer Date: 08/03/2021 - regarding Ph.D Programmes in IITs.

Sir,

With reference to your email dated 25.02.2021 on the subject cited above the requisite information pertaining to IIT Bombay is placed below.

Sr. no	Question	Reply
a.	Whether the Government aware of a recent report in the media that students from SC/ST communities faced a lower acceptance rate into PhD programmes at the Indian Institute of Technology (IITs)	NA
b.	If so, the Government response to the same including reasons for such an occurrence	NA
c.	The year wise data of the number of applicants from General, SC, ST, OBC categories to PhD programmes at each of the IITs and the number of applicants accepted, during the last five years	Please see Annexure I attached
d.	The number of vacant reserved PhD seats for each category at the IITs, during the last five years	

Yours faithfully,

Sd/-
REGISTRAR

LOK SABHA UNSTAREED DIARY NO. 6997 ANSWER DATE:- 08.03.2021

S.No.	Name of the IITs	Academic Year	No. of application received in Ph.D					No. of application accepted in Ph.D					No of Vacant Ph.D Seats				
			General	SC	ST	OBC	Total	General	SC	ST	OBC	Total	General	SC	ST	OBC	Total
1	IIT Bombay	2015-16	4520	690	139	1399	**6748**	151	26	4	72	**253**	0	18	19	11	**48**
		2016-17	4758	664	119	1512	**7053**	162	22	5	61	**250**	4	27	19	29	**79**
		2017-18	4257	667	109	1346	**6379**	150	27	3	49	**229**	16	22	21	41	**100**
		2018-19	4510	746	128	1494	**6878**	143	30	4	56	**233**	26	18	22	35	**101**
		2019-20	4587	749	154	1625	**7115**	134	32	5	63	**234**	47	22	22	34	**125**
		2020-21	5512	873	181	2083	**8649**	165	36	15	93	**309**	52	28	21	21	**122**

INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
Powai, Mumbai - 400076

No. REG/M-1(48)/2021
3rd March, 2021

To
Shri P. J. Soundararajan
Under Secretary (IITs)
Department of Higher Education
Ministry of Education
428-C, Shastri Bhawan,
New Delhi – 110015.

Subject: Lok Sabha Admitted Question LSQ No. 2282 on 08.03.2021 regarding Number of Engineering Graduates.

Sir,

With reference to your email dated 03.03.2021 on the subject cited above the requisite information pertaining to IIT Bombay is placed below.

Year	Number of Engineering Graduates				
	Graduated	Participated in Placement	Secured Placement	Percentage: (Placement/Participated)* 100	Percentage: (Placement/Graduated)* 100
2020	690	549	503	91.62	72.89
2019	683	549	490	89.25	71.74
2018	651	514	438	85.21	67.28

Most of the Non-participated students in placement activity have enrolled for higher studies.

Yours faithfully,

Sd/-
REGISTRAR

भारतीय प्रौद्योगिकी संस्थान मुंबई
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IIT Bombay

No. REG/L-10/2021
03.12.2021

To
Shri P. J. Soundararajan
Under Secretary (IITs)
Department of Higher Education
Ministry of Education
428-C, Shastri Bhavan,
New Delhi – 110001.

Subject: **PROVISIONALY ADMITTED QUESTION FOR THE RAJYA SABHA Starred /Unstarred Diary No.- S3376 for 15.12.2021 regarding Patents by IITs asked by Shri K.J. Alphons**

Dear Sir,

With reference to your email dated 02.12.2021 on the subject cited above the requisite information pertaining to IIT Bombay is furnished below:

a) **The number of patents which have been registered by IITs in the country over the past five years;**
➤ The total number of patents granted in the last 5 years by IIT Bombay is **295**. Please refer attached excel file "Patents by IITs – IIT Bombay" for year wise break-up.

b) **How many of these patents have been converted into products and processes which have benefited the country;**
➤ Out of the patents listed in response to (a), **7** technologies have been licensed by IITB for commercialization in the last 5 years. Please refer attached excel file "Patents by IITs – IIT Bombay" for year wise break-up.

c) **The commercial value of these patents which have become commercially viable; and**
➤ IIT Bombay has earned Rs. 41,21,000/- (Rs. Forty-One Lakh Twenty-One Thousand Only) as royalty/license fee for commercialization of some of the above mentioned technologies. Depending upon the product and technology, royalty amount usually varies from 2 – 5% of the commercial value of the product. Please refer attached excel file "Patents by IITs – IIT Bombay" for year wise break-up".

d) **Whether Government is satisfied with the performance of these institutions?**
➤ MoE may reply.

Yours Sincerely,
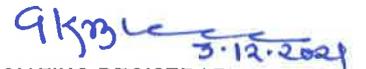
OFFICIATING REGISTRAR

Encl: Excel file "Patents by IITs – IIT Bombay"

No. REG/L-10/2021
10th March, 2021

To
Shri P. J. Soundararajan
Under Secretary (IITs)
Department of Higher Education
Ministry of Education
428-C, Shastri Bhawan,
New Delhi – 110015.

Subject: Rajya Sabha Provisionally Admitted Starred/Unstarred Dairy No. U4075 for answer on 18.03.2021 regarding "Reservation norms in IITs

Sir,

    With reference to your email dated 06.03.2021 on the subject cited above the requisite information pertaining to IIT Bombay is placed below.

a) the details of the applicability of existing reservation norms in Ph.D. and postgraduate programme admissions in IITs through seats which are not funded by Government sources, like research project staff, sponsored, self-financed, external and part-time researchers;
  ➤ The existing reservation norms in Ph.D. and postgraduate programme admissions in IITs are not applicable to seats which are not funded by Government sources, like research project staff, sponsored, self-financed, external and part-time researchers are over and above the sanctioned intake for Teaching Assistantship (TA) category.

b) whether cut-off marks for SC/ST/OBC/EWS categories, decided by the various departments of IITs, for selection to their research programmes are regulated by any directives issued by Government/courts;
  ➤ The cut-off marks for SC/ST/OBC/EWS categories are decided by the Shortlisting/ Selection committee of the concerned academic unit.

c) the details on how cut-offs are decided for each social category?
  ➤ The cut-offs are decided by the Shortlisting/ Selection committee of the concerned academic unit on the basis of the no. of applications received, no. of supervisors/ guide available and the academic background of the candidates.

Yours faithfully,

Sd/-
REGISTRAR

INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
Powai, Mumbai - 400076

No. REG/L-10(4)/2021
17th March, 2021

To
Shri P. J. Soundararajan
Under Secretary (IITs)
Department of Higher Education
Ministry of Education
428-C, Shastri Bhawan,
New Delhi – 110015.

Subject: Lok Sabha Starred Dairy No. 10886 for answer on 22.03.2021 regarding "Public fund Universities or colleges"

Sir,

      With reference to your email dated 16.03.2021 on the subject cited above the requisite information pertaining to IIT Bombay is placed below.

Sr. no	Question	Reply
a.	the Indian Institute of Technology Delhi and many other similar public-funded Universities want to setup campus abroad, details of the various public-funded University came up with similar demand;	N/A
b.	the public-funded Universities or Colleges, whether such extensions will be through Government-to-Government dialogue or through Institute-to-Institute collaboration, details; and	N/A
c.	the details of how will the Government help them with funding for these extensions abroad or they have to do it on their own through private funding and if so, the details thereof?	MoE to reply

Yours faithfully,

Sd/-
REGISTRAR

भारतीय प्रौद्योगिकी संस्थान मुंबई
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डॉ. प्रेमकुमार आर
कुलसचिव
Dr. R. Premkumar
Registrar

No. REG/L-10(4)/2021
19th March, 2021

To
Shri P. J. Soundararajan
Under Secretary (IITs)
Department of Higher Education
Ministry of Education
428-C, Shastri Bhawan,
New Delhi – 110015.

**Subject: Lok Sabha Unstarred question Dairy No. 3390 for answer on 25.03.2021
regarding representation of reserved category students in IITs.**

Sir,

With reference to your email dated 16.03.2021 on the subject cited above the requisite information pertaining to IIT Bombay is placed below.

a)   **whether students from the Scheduled Caste(SC) and Scheduled Tribe (ST) communities have significantly poor representation and acceptance rate in Ph.D programmers at the Indian institute of Technology(IITs) in the country; and**

Reply: IIT Bombay has admitted candidates belonging to Scheduled Caste (SC) and Scheduled Tribe (ST) category by following the existing admission norms/ concessions as per GoI guidelines. However, the applications received from the Scheduled Caste (SC) and Scheduled Tribe (ST) category candidates are less. Further, the students discontinue / cancel their admission after joining.

b)   **if so, the details thereof during the last five years and current year, course and category-wise and the reasons therefore along with corrective steps being taken in future?**

Reply:

1. Course and Category wise details during 2016 to 2020 are attached at Annexure I.
2. As per the GoI orders 15% and 7.5% seats are reserved for SC/ST category students respectively in Ph.D. programmes.
3. All SC/ST students are given concession in application fees for all programmes.
4. A concession of 10% in the marks is given to students belonging to SC/ST category (than that of GN category) (in their Qualifying Degree Marks), while considering admission for Ph.D. programmes.

5. For Ph.D. programme where admission is through "written test / interview" the students belonging to SC/ST category are given 2/3rd concession in written test / interview marks to that of GN candidates.
6. All SC/ST students admitted to Ph.D. programmes are exempted from payment of tuition fees irrespective of their parental income.
7. All PG/PhD students belonging to SC/ST category admitted under TA category are paid MHRD TAship.
8. Admissions for Ph.D programme are being processed TWICE in a year. Seats remaining vacant during Autumn Semester (July) are being used for admissions in Spring (January) Semester.
9. There is a faculty advisor to look after/solve the issues of the students belonging to SC/ST category.
10. The Institute also has a SC/ST cell to address the academic and non-academic issues and complaints received from students in reserved categories.
11. The Institute take special care for SC/ST students with weak academic performance by putting them in Academic Probation (AP).

Yours faithfully,

REGISTRAR

भारतीय प्रौद्योगिकी संस्थान मुंबई
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डॉ. प्रेमकुमार आर
कुलसचिव
Dr. R. Premkumar
Registrar

No. REG/L-10(4)/2021
19th March, 2021

To
Shri P. J. Soundararajan
Under Secretary (IITs)
Department of Higher Education
Ministry of Education
428-C, Shastri Bhawan,
New Delhi – 110015.

Subject: Rajya Sabha Provisionally Admitted Starred/Unstarred Dairy No. U3285 for answer on 18.03.2021 regarding "Reservation status in IIT, Bombay".

Sir,

With reference to your email dated 08.03.2021 on the subject cited above the requisite information pertaining to IIT Bombay is placed below.

a) **Whether none of the 26 departments in IIT Bombay managed to fill seats reserved for Scheduled Tribe students in Ph.D. programmes between 2015 and 2019**

Reply: IIT Bombay has admitted candidates belonging to Scheduled Tribe category by following the existing admission norms/concessions as per GOI guidelines.

b) **if so, the details thereof quota-wise seats reserved/filled up/kept vacant, course-wise and IIT-wise and department-wise also and reasons therefor and**

Reply: Information attached at Annexure I.

Few reasons:
1. The selection is purely based on merit.
2. Applications received from scheduled Tribe category are less.
3. Students joins the programme and later on withdraws /cancels their admission.

c) **Corrective steps being taken in this regards?**
Reply:
1. As per the GoI orders, 7.5% seats are reserved for ST students respectively in Ph.D. programmes.
2. All ST students are given concession in application fees for all programmes.
3. A concession of 10% in the marks is given to students belonging to ST category (than that of GN category) (in their Qualifying Degree Marks), while considering admission for Ph.D. programmes.

4. For Ph.D. programme where admission is through "written test / interview" the students belonging to ST category are given 2/3rd concession in written test / interview marks to that of GN candidates.
5. All ST students admitted to Ph.D. programmes are exempted from payment of tuition fees irrespective of their parental income.
6. All PG/PhD students belonging to ST category admitted under TA category are paid MHRD TAship.
7. Admissions for Ph.D programme are being processed TWICE in a year. Seats remaining vacant during Autumn Semester (July) are being used for admissions in Spring (January) Semester.
8. There is a faculty advisor to look after/solve the issues of the students belonging to ST category.
9. The Institute also has a SC/ST cell to address the academic and non-academic issues and complaints received from students in reserved categories.
10. The Institute take special care for ST students with weak academic performance by putting them in Academic Probation (AP).

Yours faithfully,

REGISTRAR

INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
Powai, Mumbai - 400076

No. REG/L-10(4)/2021
19th March, 2021

To
Shri P. J. Soundararajan
Under Secretary (IITs)
Department of Higher Education
Ministry of Education
428-C, Shastri Bhawan,
New Delhi – 110015.

Subject: Rajya Sabha Admitted Unstarred Question No. 3380 for answer on 25.03.2021 regarding "Vacant Faculty Posts Under SC/ST/OBC category in IITs"

Sir,

With reference to your email dated 19.03.2021 on the subject cited above the requisite information pertaining to IIT Bombay is placed below.

a) **whether large number of faculty posts under SC/ST/OBC reservation category are vacant in various IITs**

Reply: IIT Bombay follows flexible cadre system for appointment of faculty. Thus, the overall sanctioned strength of faculty in different grades (i.e. Professor, Associate Professor & Assistant Professor) is not fixed. However, overall sanctioned strength (calculated based on faculty student ratio 1:10) at IIT Bombay. The Students Strength of IIT Bombay was 10549 in 2018 and it is 11658 in 2020. Accordingly, an additional 100 posts have been added and the same are also vacant.

b) **if so, the details of such vacant posts in each of the IITs; and**

Reply: same as (a)

c) **the reasons for not filling such vacancies?**

Reply: Institute has published rolling Advertisement on IITB website since 2007 giving full details about percentage of reservation for SC, ST and OBC categories. Moreover, IIT Bombay advertises Faculty positions in leading Newspapers, Employment news, all over India every year. Despite best efforts made, vacancies of Assistant Professor in a given year, do not have representation of SC, ST and OBC to the extent of the laid down percentage, due to non-availability of suitable candidates with qualifications and experience required for such positions of these categories. It is recorded that Institute is taking initiatives by calling all SC, ST & OBC candidates into Interview irrespective of the decision of the DPC & Seminar. Also Institute has recently advertised 100 vacancies out of which OBC = 27, SC = 15 & ST= 7 (total = 49) for Assistant Professor. However, Institute received only 15 applications from reserved category meeting minimum requirement as per MoE guidelines (OBC-NC = 01, SC = 12 and ST = 02) and could select only 05 candidates (OBC = 01, SC = 03 and ST= 01) by the Selection Committee.

Yours faithfully,

Sd/-
REGISTRAR

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IIT Bombay

No.AO/Legal Cell/LSQ/2021
Date : July, 2021

To
Shri P. J. Soundararajan,
Under Secretary to Govt. of India,
Ministry of Human Resource Development,
Department of Higher Education, Tech. Sect-I,
New Delhi – 110001

Sub : <u>L S P A Q DY NO 3547 for 2.8.2021</u>

Dear Sir,

Please refer to your e-mail dated 29.7.2021 forwarding trailing e-mail from TC Section of Ministry of Education regarding Lok Sabha question as stated above regarding discrimination of ST in various Institutes.

In this connection, following reply is submitted :-

Q. (a) A complaint was received from one of ST employees of IIT Bombay regarding caste based discrimination in the year 2019 against his Head of the Department under whom he is working. The Competent Authrority of the Institute appointed a Fact Finding Committee consisting of one Senior Faculty member, Liaison Officer for SC/ST's and one Administrative Officer of the Institute to look into the complaint of harassment on caste basis received from the said employee. The Fact Finding Committee after conducting the inquriy has observed that there is no direct caste based address by the Head of the Section against the Complainant. The Competent Authority has issued advisory note to the Head of the department stating that he should be more sensitive in dealing with matter of sub-ordinate staff member during conversations as well as implementing the orders of the Section. The said matter has been reported to National Commission for Scheduled Tribes, Bhopal.

Q. (b) Any complaint or grievance raised by ST category employees is looked into by a Committee, including Liaison Officer SC/ST's for further needful.

Q. (c) to (e) Ministry may reply.

Yours faithfully,

REGISTRAR

Re: IRCC Response to Question (e) Lok Sabha Unstarred Dairy No. 12326 for answer on 22.03.2021 regarding "Institute Development Plan"

Q (e) The details of the contribution of the academics during the challenging times of COVID-19 and for their contribution in combating the COVID-19 by new scientific research?

Various groups of researchers at Indian Institute of Technology Bombay have conducted projects both short term and long term, to work on areas for COVID-19 mitigation. Some of these have been funded internally to work towards seeking immediate solutions and / or proof of concept and some have been funded by Government of India/industry partners towards addressing COVID-19 related issues.

a. No of projects undertaken: 45+
b. No. of projects with industry participation: 25
c. No. of projects supported by IIT Bombay: 25
d. No. of technologies licensed: 13

Given below is a representative list of projects initiated in various areas of research towards mitigation of COVID-19 in various areas of R&D:

Sanitization approaches
- UVC based portable sterilization unit & portable germicidal cabinet
- ECORSANI: Phytoformulations for walk-through sanitizers, hand rub and surface sanitizers
- Incineration device for safe disposal of masks / gloves in hospitals and quarantine centres
- Surface spray for decontamination and antiviral action
- Hand sanitization solution for Institute personnel

Medical Devices
- CPAP helmet for mildly distressed patients
- Mechanized ambu-bag for COVID patients with moderate respiratory difficulties
- Advanced ventilator for severely critical COVID-19 patients
- Vi-SWAAS: ICU ventilator for COVID patients

Personal protection
- DURAPROT: Wash resistant antibacterial & antiviral coatings for masks & textiles
- Biodegradable antiviral plastic like films for face shields
- PPE solutions: Face masks
- PPE solutions: Low-cost face shields
- PPE solutions: Aerosol box for hospitals
- Washable PPE coverall suit
- Urination attachment for PPE coverall suit
- Low cost temperature controller for PPE coverall suit

Anti-viral drug / molecule synthesis
- In-situ nasal gel formulations for pre-exposure prophylaxis of COVID-19
- Identification of global metabolite biomarkers in COVID-19 infected patients for targeted therapy
- Plasma proteomic analysis to identify biomarkers and therapeutic targets: A pilot study

- PICOVRID: Anti-viral nutraceuticals and phytopharmaceuticals
- NANOSURF: Aerosols for pneumonitis and ARDS complications of COVID-19
- TGuard: Anti-viral nutraceuticals and phytopharmaceuticals developed from palm-based constituents

Surveillance
- CORONTINE: Contact tracing app for asymptotic COVID carriers
- SAFE: App for quarantine adherence
- Privacy preserving contact tracing
- Contactless video surveillance at quarantine facilities

IT Solutions
- World Wide Help: Solution for user-friendly, cost effective and customized information access with humans-in-the-loop
- e-token and online ordering system
- Short-term projection of COVID-19 medical resources and inventory
- Lokacart: Platform for enabling MSMEs for e-commerce

Diagnostic approaches
- Single-round smart pooling technique for COVID-19 testing

Dean (R&D)'s office has also released some popular articles on Covid-19 related R&D at IIT Bombay. The same is appended as Annexure A.

Registrar.office@iitb.ac.in   Cont: 7021 / 4002

No. REG/L-10/2021
26th July, 2021

To
Shri P. J. Soundararajan
Under Secretary (IITs)
Department of Higher Education
Ministry of Education
428-C, Shastri Bhawan,
New Delhi – 110001.

Subject: Rajya Sabha Question Diary No. U1116 for 28.7.2021 regarding"Inclusive ICT for people with disabilities" asked by Smt. Yandana Chavan,Hon'ble Member of Parliament (Rajya Sabha).

Sir,

     With reference to your email dated 22.07.2021 on the subject cited above the requisite information pertaining to IIT Bombay is placed below.

(a) **Whether all Government websites are accessible for persons with disabilities (PwDs) as recommended by TRAI in 2018**

Reply: The IIT Bombay website includes accessible features such as using accessible colour schemes, providing sufficient colour contrast between text and background, making content readable, and using robust content and reliable interpretation. The website is also designed to maximise compatibility with various tools (web browsers, assistive technologies, etc) as well as platforms (desktops, mobiles devices, etc.). We will also be implementing provisions of text alternatives for images, providing captions or transcripts for video and audio, if any. In summary, the IIT Bombay website is generally compliant for accessibility.

(b) **Whether Government plans to notify accessibility standards for information and Communication Technology (ICT) education under Section 40 of the Rights for Persons with Disabilities (RPwD) Act:**

Reply: Not Applicable; Ministry may reply

(c) The details of steps Government took to ensure accessibility in education through online classroom teaching and educational material for (PwDs) during COVID-19 Pandemic?

Reply: During the online semesters due to COVID-19, IIT Bombay made all its course material (lecture slides, videos, notes, etc) available online to students for download at any time. IIT also ensured that all students procured laptops, providing funding via Alumni donations to those who needed funds for procuring laptops. Students with accessibility issues would have been able to use standard software such as screen readers or magnifiers to access the course material.

IIT Bombay attempted to give the students an even better than the physical classroom experience for online courses during COVID-19 Pandemic. Video recordings of all lectures were made available to the students. This would enable them to go over the lecture material multiple times and with a control over the volume (useful for hearing impaired) as also the magnification (useful for the vision impaired). Laptops and internet data packs were provided to needy PwD students. Further, those PwD students who requested hostel room allotment inside the IIT Bombay campus due to poor connectivity in their homes were provided hostel accommodation following standard protocols keeping in mind their health and safety. As per standard practice, 20 minutes additional time for every hour of an exam was provided to the PwD students.

Yours faithfully,

REGISTRAR

Indian Institute of Technology Bombay

Office of the Registrar

To
Shri P. J. Soundararajan
Under Secretary (IITs)
Department of Higher Education
Ministry of Education
428-C, Shastri Bhawan,
New Delhi – 110001.

Subject: Provisionally admitted Rajya Sabha Question Starred/ Unstarred Diary No. U2456 for 05-08-2021 regarding Ph.D in Centrally Funded Technical Institutions (CFTIs) " asked by Dr. V. Sivadasan

Sir,

With reference to the email dated 28.07.2021 from MoE on the subject cited above the requisite information pertaining to IIT Bombay is placed below:

(a) The total number of students who have successfully completed their Ph.D. from Centrally Funded Technical Institutions during 2016 to till date, along with their SC/ST/OBC composition
Reply: Details mentioned in table below:

(b) The number of Ph.D graduates from Centrally Funded Technical Institutions who were recruited for Assistant Professor, Associate Professor and Professor posts at each of the Centrally Funded Technical Institutions during 2016 to till date, along with their General/SC/ST/OBC/EWS composition;
Reply: Details mentioned in table below

Position	Number of Ph.D graduates from CFTIs *					
	General	SC	ST	OBC	EWS	Total
Professor	38	01	--	--	--	39
Associate professor	40	01	--	--	--	41
Assistant Professor	37	3	1	1	--	42

The number provided considering the list of CFTIs available on the MoE website.

(c) The CFTIs have prepared the reservation roster for direct recruitment to Assistant Professor, Associate Professor and Professor posts, till date?

Reply: IIT Bombay follows flexible cadre system for appointment of faculty. Thus, the overall sanctioned strength of faculty in different grades (i.e. Professor, Associate Professor & Assistant Professor) is not fixed. However, overall sanctioned strength is calculated based on faculty student ratio 1 : 10 at IIT Bombay. IIT Bombay follows guidelines given in MHRD O.M. F.No.16-8/2000-TS.I dtd. 09.06.2008 and F.No.33 - 312018 – TS.III dated 05.11.2019 for reservations.

Yours faithfully,

**Sd/-
REGISTRAR**

Indian Institute of Technology Bombay

Office of the Registrar

No. REG/L-10/2021
5th August, 2021

To
Shri P. J. Soundararajan
Under Secretary (IITs)
Department of Higher Education
Ministry of Education
428-C, Shastri Bhawan,
New Delhi – 110001.

Subject: Provisionally Admitted Rajya Sabha Unstarred Question Diary No.S3411 for answer on 05.08.2021 regarding Fees in Central Government Universities asked by Neeraj Dangi

Sir,

With reference to your email dated 29.07.2021 on the subject cited above the requisite information pertaining to IIT Bombay is furnished below:

(a) whether Delhi University, Jawaharlal Nehru University, Banaras Hindu University and IITs are Central Universities, coming under the ambit of the Central Government

Reply: IIT Bombay is established by Act of Parliament called 'The Institute of Technology Act 1961' and is fully funded by the Ministry of Education (MoE), Government of India.

(b) the details of fees for BA/BSc in History, English, Physics, Mathematics, Biology and Chemistry courses in Delhi University, Jawaharlal Nehru University, Banaras Hindu University and IITs, during the last five years;

Reply: Semester Fee at IITB for B.S. (Chemistry, Mathematics, Economics)

Year	Tuition Fee (in Rs.)	Total Fee (Rs.)
2016	1,00,000.00	1,22,876.00
2017	1,00,000.00	1,27,600.00
2018	1,00,000.00	1,25,700.00
2019	1,00,000.00	1,25,850.00
2020	1,00,000.00	1,24,600.00

(c) whether there has been a revision in fees in the above mentioned universities; and

(d) if so, the reasons therefor and details thereof?

Reply: There has been no revision in the Tuition Fee from the year 2016 to 2020. However, minor revision in some of the other fee components were done based on the prevailing situation.

Yours faithfully,

Sd/-
REGISTRAR

Indian Institute of Technology Bombay

Office of the Registrar

registrar.office@iitb.ac.in
Cont: 7021 / 4002

No. REG/L-10/2021
27th July, 2021

To
Shri P. J. Soundararajan
Under Secretary (IITs)
Department of Higher Education
Ministry of Education
428-C, Shastri Bhawan,
New Delhi – 110001.

Subject: Rajya Sabha Unstarred Question No. 1173 for answer on 29.07.2021 regarding "Composition of reserved categories in Centrally funded technical institutions" asked by Shri K. Somaprasad

Sir,

      With reference to your email dated 23.07.2021 on the subject cited above the requisite information pertaining to IIT Bombay is placed below.

(a) Number of students who were admitted in each undergraduate-level programs at each Centrally funded technical institutions for each year from 2016 onwards, along with their SC/ST/OBC/EWS composition

Reply: Details mentioned in table below:

YEAR	GN		SC		ST		OBC		EWS		TOTAL		TOTAL
	M	F	M	F	M	F	M	F	M	F	M	F	
2016	410	44	132	9	62	7	251	18	--	--	855	78	933
2017	412	59	130	16	62	9	249	19	--	--	853	103	956
2018	437	89	133	24	66	8	245	47	--	--	881	168	1049
2019	425	96	141	30	73	14	269	55	36	7	944	202	1146
2020	430	114	171	41	83	20	309	75	121	31	1114	281	1395

(b) whether the dropout trends very across different social categories in the same institutions:
Reply: Details mentioned in table below:

YEAR	GN		SC		ST		OBC		TOTAL		TOTAL
	M	F	M	F	M	F	M	F	M	F	
2016	1	0	1	0	0	0	0	0	2	0	2
2017	1	2	1	0	0	0	2	0	4	2	6
2018	4	1	2	0	0	0	0	0	6	1	7
2019	2	0	1	0	1	0	1	0	5	0	5
2020	1	0	1	0	0	1	0	0	2	1	3

(c) if so, the details thereof and the remedies taken if any; and
Reply:

1. The Institute take special care for students with weak academic performance by putting them in Academic Probation (AP) and Academic Rehabilitation Programme (ARP).
2. There is a faculty advisor to look after/solve the issues of the students belonging to reserved (SC/ST) category.
3. All SC/ST students admitted to B.Tech., Dual Degree, B.Des., 4 Yr. B.S., M.Tech., M.Sc., M.S. and Ph.D. programmes are exempted from payment of tuition fees irrespective of their parental income.
4. SC/ST students are awarded scholarship viz., free messing (basic menu), pocket allowance of Rs. 250/- per month and exemption from payment of hostel seat rent of Rs. 500/- per semester provided their parental income is below Rs. 4,50,000/- per annum.
5. All students including SC/ST students in the final year (9th and 10th semesters) of Dual degree programme are eligible for Teaching Assistantship on the basis of their CPI till at the end of 8th semester. Students with CPI 8.00 and above entitled for TAship @ Rs. 12,400/- per month and students with CPI between 6.00 and 7.99 entitled for TAship @ Rs. 6,000/- per month. The cases of the students with CPI below 6.00 are also considered and decided by the Head of the Department for payment of appropriate TAship at lower rate.
6. All students including SC/ST students with B.Tech. degree from IITs with CGPA/CPI 8.00 and above, are eligible to apply for direct admission to M.Tech. Programme (i.e. without GATE score).
7. A preparatory course of one academic year exists exclusively for SC/ST students. Selection for this course is made from the Joint Entrance Examination list of SC/ST students who did not qualify for admission. On successful completion of the preparatory course at the IIT, they are eligible to join the UG programme and they do not require to write the JEE again.
8. While considering for BTech programme, a separate Preparatory Course rank list is prepared with double relaxation. This relaxation is to the extent of 75% [with respect to candidates belonging to GENERAL category] and applies to both subject-wise minimum marks and aggregate marks.

Unfilled seats reserved for SC category candidates are allocated to candidates in the reparatory Course rank list. Such candidates are given special training for 1-year after which they pursue the regular academic program.

(d) if not, the reasons therefor?
Reply: NA

Yours faithfully,

Sd/-
REGISTRAR

To
Shri P. J. Soundararajan
Under Secretary (IITs)
Department of Higher Education
Ministry of Education
428-C, Shastri Bhawan,
New Delhi – 110001.

<center>Subject: RSUQ 2754 for 12.08.2021</center>

Sir,

With reference to email dated 06.08.2021 from MoE on the subject cited above the requisite information pertaining to IIT Bombay is furnished below;

(a) **Whether Government is aware about the need to develop an ecosystem of technological education in Indian languages and translate global journals into regional languages;**
Reply: MoE may reply.

(b) **If so, the details of new initiatives being taken in this regard;**
Reply: Ministry of Education funded Spoken Tutorial project at IIT Bombay has been providing IT training through our languages, see https://spoken-tutorial.org. Spoken Tutorials are a 10 minute long audio-video tutorials, created for self learning. The audio of these tutorials are dubbed into all our languages. The video is kept in English, to retain the employment potential of the mother tongue learners in the IT sector. There are about 1,000 tutorials in English. Including dubbing, there are more than 10,000 tutorials. A large number of college students have been trained using these Spoken Tutorials.

(c) **Whether the Ministry's attention has been drawn the statement of the Prime Minister about the need to progress towards education models that are flexible, seamless and are able to provide learning opportunities according to the requirements of the learners;**
Reply: MoE may reply.

(d) **If so details of the measures taken in this regard?**
Reply: IIT Bombay provides multiple entry/exit system, multidisciplinarity of curriculum/programs, Inter-Disciplinary Dual Degree Programmes (IDDDPs) etc.

<div align="right">
Yours faithfully,

REGISTRAR
कुलसचिव/ Registrar
भारतीय प्रौद्योगिकी संस्थान बम्बई
Indian Institute of Technology Bombay
पवई/ Powai, मुंबई-76/ Mumbai-76.
</div>

भारतीय प्रौद्योगिकी संस्थान मुंबई
पवई, मुंबई-400 076, भारत

Indian Institute of Technology Bombay
Powai, Mumbai-400 076, India

Phone : (+91-22) 2576 7020 (O)
         2572 3723, 2576 8020 (R)
Fax   : (+91-22) 2572 3645
Email : registrar@iitb.ac.in
Web   : www.iitb.ac.in

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डॉ. प्रेमकुमार आर
कुलसचिव

Dr. R. Premkumar
Registrar

No. REG/M-1(48)/2020
10th December, 2020

To
Shri P.J. Soundararajan
Under Secretary (IITs)
Department of Higher Education
Ministry of Education,
428-C, Shastri Bhavan,
New Delhi – 110011.

Subject: Scale and Stages for various Academic Posts in CFTIs - reg

Sir,

This has reference to your email dated 03.12.2020 to the Director IIT Bombay on the subject citied above. The requisite information pertaining to IIT Bombay in the prescribed format is furnished below:

Scale of Pay				
Post	4th CPC	5th CPC	6th CPC	7th CPC
Assistant Professor Grade II	3000-100-3500-125-5000	10000-325-15200	15600-39100 PB-3 with AGP 6000 / 7000	57700-98200 AL 10 / 68900-117200 – AL 11
Assistant Professor Grade I	3700-125-4950-150-5700	12000-420-18300	15600-39100 PB-3 with AGP 8000	101500-167400 – AL 12
Associate Professor	4500-150-5700-200-6300	16400-450-20000	37400-67000 PB-4 with AGP 9500	139600-211300 – AL 13A2
Professor	5100-150-5700-200-7300	18400-500-22400	37400-67000 PB-4 with AGP 10500	159100-220200 – AL 14A
Professor HAG	--	--	67000-79000 HAG	18200-224100 – AL 15

Yours Faithfully,

REGISTRAR

INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
Financial Assitance for the SC Students Between the Year 01-01-2018 and 31-12-2020
Date : 05.01.2021

Year:	Sr. No.	Student Name:	Roll No.:	Amount:
2005	1	M Kumar	02404301	20000
2005	2	Om Prakash	03401005	20000
2005	3	Lalit Pundlikrao Khandare	04808002	25000
2005	4	Deelip Dattatraya Mhaske	04808004	25000
2005	5	P. Mathiazhagan	02416301	20000
			Total	110000
2006	6	Bairagi Charan Mallick	02403303	48000
2006	7	Pramod Kumar	03406303	32000
2006	8	Debasish Das	02402009	32000
2006	9	Suryakant Purushottam Nagdewe	02401001	32000
2006	10	Subhra Adhikari	02411006	32000
2006	11	Khadse Anil Nivrutti	03402006	32000
2006	12	Udaykumar Anna Dabade	04410303	16000
2006	13	Shende Nilratan Rambhau	04408006	16000
2006	14	Parmar Nileshkumar Harshadbhai	03402005	48000
			Total	288000
2007	15	Shailesh Kewaldas Dhoke	04416001	48000
2007	16	Vijay Devidas Hiwarkar	05411008	48000
2007	17	Vijay Devidas Hiwarkar	05411008	48000
2007	18	Gayadri Devi G.	05408006	32000
2007	19	Prabhakaran S.	04411003	48000
2007	20	Nitin Sagar	05430006	32000
2007	21	Babita Rani Choudhary	05406003	32000
2007	22	Prasanta Das	03403308	32000
			Total	320000
2008	23	Vagge Shashikant Tukaram	04416301	16000
2008	24	G. Sreedhar	05416003	48000
2008	25	Monalisa Mallick	07406302	48000
2008	26	Rahul Dev Jayant	06430005	32000
2008	27	G. Sreedhar	05416003	32000
2008	28	Swati M.	05430307	32000
2008	29	Navan Ramesh Raju	05407009	48000
			Total	256000
2009	30	Parmer Jigneshkumar Harshadray	05402006	48000
2009	31	Kamleshwar Ratre	07406004	32000
2009	32	Murugan K.N.	06401004	32000
2009	33	G. Hema Sagar	05402901	32000
2009	34	Ashok Kumar Mocherla	05408007	48000
2009	35	Watvisave Deepak Shantaram	07410002	80000
2009	36	Thiagu Ranganathan	09427001	60000
2009	37	Daggupati Sateesh	06402006	48000
			Total	380000
2010	38	Nagsen Pandurangji Meshram	06411006	65000
2010	39	Sachin Adinath Mastud	08410801	34000
2010	40	Pimpale Badrinarayan B.	07407301	71767
2010	41	Sunil Kumar	07402006	80000
2010	42	Sumedh Yamaji Mhaske	07404801	39200

2010	43	Meenakshi Bhaisare	07407005	50000
2010	44	Ravi S Manohar	07412005	60000
2010	45	Kailash Sekhar P.	10927839	76000
2010	46	Gollapudi Anil Kishor	07430003	77325
2010	47	Shende Nilratan Rambhau	04408006	60000
2010	48	SAURAV TALUKDAR	08005024	60000
			Total	*673292*
2011	49	Dhanya Subhash	07430310	71109
2011	50	Amol Ashok Pawar	07402012	67284
2011	51	Sohom Mandal	10318014	65000
2011	52	Srinu Gangolu	10411010	65500
2011	53	Kousik Midya	06407014	66885
2011	54	Rajendra Laxman Doiphode	09411801	35000
2011	55	Sathe Balasaheb Kisan	08431804	42500
2011	56	Chandrashekhar Azad Kashyap	10406306	53500
2011	57	Rajan Singh	08436005	49500
2011	58	Bibekananda Maji	06I12007	49470
2011	59	Shinde Vasudev Dhondiram	07411801	65000
2011	60	BHOYAR SANKESHA PRABHAKAR	08D17009	59000
2011	61	N. Anitha	06I12008	45000
2011	62	TEMBHURNE SAURABH YUVRAJ	08D07024	65000
2011	63	Gajbhiye Sneha Jagdish	09423004	62133
			Total	*861881*
2012	64	Revelly Ajay Kumar	09411009	67000
2012	65	Balwant Niranjan Bhasme	09401301	58507
2012	66	RAVENDRA KUMAR	09010052	60000
2012	67	Biswanath Bhoi	10436004	65000
			Total	*250507*
2013	68	Rakesh Raman	113310013	65000
2013	69	Suresh S	07411008	65000
2013	70	Waghmare Kiran Kishor	113370004	80000
2013	71	Lashkare Sandip Gangadharrao	113070041	74800
2013	72	Dongre Ganesh Govardhan	10410301	80000
2013	73	Subhalaxmi Behera	09402607	65000
2013	74	Bandela Anil Kumar	114038001	77550
2013	75	Revelly Ajay Kumar	09411009	65000
2013	76	Ramesh Kumar P.	114233003	50000
2013	77	Amal Sarkar	09412601	45000
2013	78	Vijaykant	08403325	69448
2013	79	Gajbhiye Sneha Jagdish	09423004	90000
2013	80	Parthasarathi S.	08403345	90000
2013	81	M. Karthik	09402611	90000
2013	82	Mukesh Sheshrao Angrakh	133300021	90000
2013	83	VINIT KUMAR	100040038	100000
2013	84	Vikas Dhruwdas Karade	10410013	90000
2013	85	Punyashloka Debashis	123070043	90000
2013	86	Deba Datta Mandal	10304006	90000
2013	87	Shirsendu Sikdar	124040013	90000
2013	88	Pramod Kumar Naik	10408001	90000
			Total	*1646798*
2014	89	Richa Karmakar	10402013	100000
2014	90	Sunil Kumar	07402006	100000

2014	91	NARENDRA SINGH	100100062	60000
2014	92	Kumar Santosh Ramesh Babu Urmila	10412305	90000
2014	93	VIJAY MAHAWAR	09D10023	60000
2014	94	Pasi Virendra Kumar Brijalal Bindhadevi	07I12007	90000
2014	95	Praveen Kumar G.	10417002	90000
2014	96	Bathula Sudhir Kumar	123010013	100000
2014	97	Yagani Hari Vithasth	123100040	90000
2014	98	Anjan Roy	10431005	100000
2014	99	ADITYA PRAKASH SINGH	110010020	100000
2014	100	Rajendra Kumar	114040014	90000
2014	101	Ramesh Chandra Majhi	123040012	100000
2014	102	KHADSE AKSHAY BHIMRAO	100010012	90000
2014	103	Abhisek Kumar Behera	114230004	100000
2014	104	PAWAN SATISH CHAUGULE	100110066	90000
2014	105	Nitesh Prakash Yelve	124013002	90000
2014	106	Malabika Biswas	134080008	100000
2014	107	Makwana Nikitabahen Navinchandra	114010009	90000
2014	108	Alka Rani	114110015	60000
2014	109	Sudha Babanrao Bhingardive	114050002	100000
2014	110	Arijit Roy	124116001	100000
			Total	*1990000*
2015	111	Chinnam Ajay Kumar	10403324	90000
2015	112	Jitendra Kumar	09I12009	100000
2015	113	Ratnababu Mamidi	09407010	100000
2015	114	Rudurubati Sivaramakrishna	10407006	100000
2015	115	Chandrashekhar Azad Kashyap	10406306	90000
2015	116	Naval Vishwanath Koralkar	114170006	100000
2015	117	S Deepthi Yarramala	114033019	100000
2015	118	Sendhil Vigneshwar D	124040002	90000
2015	119	Mangesh Suryabhan Thakare	10417302	60000
2015	120	Patil Sachin Kishor	10431802	45000
2015	121	Prasenjit Mondal	114033030	100000
2015	122	Jagadeesh Babu S M	124110009	100000
2015	123	Pallavi Dnyandeo Halkare	114303009	90000
2015	124	Chandan Das	124170002	100000
2015	125	Satheeshkumar K.	114030005	90000
			Total	*1355000*
2016	126	Mahitosh Biswas	134366009	90000
2016	127	Mahesh Kumar Farejiya	10418701	100000
2016	128	Pranay Biswas	10I17008	90000
2016	129	Vivekanand Prakash Gondane	10411001	90000
2016	130	Priyanka Gautam	144040018	90000
2016	131	Kuldeep Kumar Kataria	114090007	90000
2016	132	Vipin Kumar	12I300005	90000
2016	133	Rahul Harishchandra Meshram	114070006	100000
2016	134	Hemantkumar A. Chouhan	124080002	100000
2016	135	Himadri Roy Dakua	10I12006	100000
			Total	*940000*
2017	136	Prem Prakash	10I30008	90000
2017	137	Swati Singh	124406005	90000
2017	138	Bhuktare Swapnil Sopanrao	124070002	90000
2017	139	Ankita Kumar	144040020	90000

2017	140	Krishna Malakar	134403001	90000
2017	141	Satchithananthi A.	123300025	90000
2017	142	Mriganka Mondal	113020038	90000
2017	143	Daradmare Sneha Bhimrao	134110007	90000
2017	144	Bachchhav Shitalben Dajibhai	114020002	90000
2017	145	Rajendra Kumar Saroj	10I12004	90000
2017	146	Mr. Sunil Kumar Ahirwar	154043001	90000
2017	147	Shirish Athawale	06408806	90000
2017	148	Gourab Sil	154040014	90000
2017	149	RATAN DAS	13I060003	100000
2017	150	Inderdip Pradipkumar Shere	124020001	100000
2017	151	Thool Khushahal Sunil	144110017	100000
2017	152	Sirshendu Arosh	124070023	90000
2017	153	Kadam Abhijit Anil	134070022	100000
2017	154	M Jaipal	144026014	100000
2017	155	Riya Mondal	144110005	90000
2017	156	Karuna Jaywant Dhale	124365001	90000
2017	157	Archana Singh	144300010	100000
			Total	*2040000*
2018	158	Shinde Amar Mohan	134180002	90000
2018	159	Ananta Kumar Sarkar	134170007	100000
2018	160	Jhuma Saha	164366004	100000
2018	161	Keerti Badkhane	134273002	100000
2018	162	Munendra Pal Singh	12I170002	100000
2018	163	Rambabu Korrapati	08412304	90000
2018	164	Jitendra Borday	144080019	90000
2018	165	Ingle Avinash Vijay	144110012	90000
2018	166	Tanushree Roy	134360004	90000
2018	167	kshetrimayum bangkim singh	164420005	90000
2018	168	Rakhahari Saha	134080013	100000
2018	169	Rathin Biswas	144420002	90000
2018	170	Avinash	124080017	100000
2018	171	kshetrimayum bangkim singh	164420005	50000
2018	172	Avinash	124080017	50000
2018	173	Rathin Biswas	144420002	50000
2018	174	Nitin Appa Lokhande	134080002	90000
2018	175	Mohon Kumar Naik	164080010	140000
			Total	*1610000*
2019	176	Shweta Shyam Prassanawar	155300022	150000
2019	177	Deepa Khandekar	144360003	140000
2019	178	SURYAWANSHI PRAVIN DHONDIBA	164270002	150000
2019	179	Kiran Kumari	154230003	140000
2019	180	Pratikkumar Vikramark Raje	144010010	150000
2019	181	Mane Siddharam Anand	154100012	150000
2019	182	Erigi Umashankar	134026005	140000
2019	183	Santanu Jana	144033019	150000
2019	184	Amrutsagar Lalitrao Vijay	164100017	100000
2019	185	Kanthi Swaroop Gunti	174460005	140000
2019	186	Harsha Vardhan Penugonda	134070011	140000
2019	187	Sakekar Anup Ashok	144300007	140000
2019	188	Nela Bala Raju	164310005	140000
2019	189	Deepak Kumar	144123009	140000

2019	190	Vinod Kumar	11I120003	140000
2019	191	R. G. Brajesh	144026015	150000
2019	192	Ankit Udai	174070008	150000
2019	193	Dibyendu Mondal	154093002	150000
2019	194	Ranjan Roy	12I120006	140000
2019	195	Pakhale Swapnil Ashok	154110019	140000
2019	196	Jithin Raj PV	144040005	140000
2019	197	Umakant Lamani	154120008	140000
2019	198	R. G. Brajesh	144026015	140000
2019	199	Surya K	144030014	150000
2019	200	Atul Manikrao Bhagat	144026009	150000
2019	201	Priyankar Chand	12I180005	150000
2019	202	Leuaa Pradipkumar Manubhai	154170009	150000
2019	203	Manil Raj	174113002	150000
2019	204	Pramod Kumar Malik	144100031	140000
2019	205	Satendra Kumar	164033051	140000
2019	206	Jayeeta Saha	154033024	150000
2019	207	Sudip Das	154020008	150000
2019	208	Ajoy Maji	144120007	150000
2019	209	Pullagura Bhargav Krishna	113020035	140000
			Total	*4880000*
2020	210	Chanchal Kumar Barman	144120011	150000
2020	211	Sonatan Das	144363002	150000
2020	212	Mrinmoy Roy	154120007	140000
2020	213	HARINDRA KUMAR KANNOJIA	154106004	150000
2020	214	Jyoti Tomar	154020005	150000
2020	215	Khushnandan Rai	154300005	150000
2020	216	Pranit Ashok Gaikwad	144100029	140000
2020	217	Ajoy Maji	144120007	150000
2020	218	Ajoy Maji	144120007	140000
2020	219	Animesh Biswas	13I120008	150000
2020	220	Leuaa Pradipkumar Manubhai	154170009	140000
			Total	*1610000*
			Grand Total	*19211478*

INDIAN INSTITUTE OF TECHNOLOGY BOMBAY

Financial Assitance for the ST Students Between the Year 01-01-2018 and 31-12-2020
Date : 05.01.2021

Year:	Sr. No.	Student Name:	Roll No.:	Amount:
2006	1	Anal Vasantrao Chavan	03418003	16000
2006	2	Prakash Vitthal Shirsat	05318401	40000
2006	3	Gopal Naik	04404301	32000
			Total	*88000*
2009	4	K Jyothi	05007031	28000
2009	5	A. Wati Walling	06408804	48000
			Total	*76000*
2010	6	Ramesh Sakharam Bhande	05402003	80000
			Total	*80000*
2011	7	Paresh Hiralal Salame	07411006	65000
2011	8	Rinzi Lama	08408008	53500
			Total	*118500*
2012	9	Sridhar Dalai	09436003	50000
2012	10	Bhukya Mangu	09407305	79450
2012	11	Manupati Ranjith Kumar	113110020	65000
			Total	*194450*
2013	12	Zodinmawia	08I12005	61000
2013	13	Dibesh Deb Barma	09408301	65000
2013	14	MEENA PRASOON	100110003	100000
			Total	*226000*
2014	15	ASHVIN MEENA	100010014	90000
2014	16	Boyapati Subrahmanyam	114074002	90000
2014	17	Hungyo Kharerin	114300003	90000
2014	18	Shekhar Hansda	10403332	90000
2014	19	Karilemla	09408009	90000
			Total	*450000*
2015	20	Abhinita Borah	10418303	90000
2015	21	Krista Roluahpuia Khiangte	10I12007	90000
			Total	*180000*
2016	22	Shalini Dolai	133110055	90000
2016	23	R B Sharmila	134040015	90000
2016	24	Shining Star Lyngdoh	124080015	100000
			Total	*280000*
2017	25	Patel Pranavkumar Vasantbhai	124010006	90000
2017	26	M Moronshing	134030002	90000
			Total	*180000*
2018	27	Ashish Soren	144020008	90000
2018	28	Baloji Adothu	154110020	100000
2018	29	Pooja Meena	12I030006	100000
2018	30	Mukesh Dhanka	11I300007	90000
2018	31	Ravi Sankannavar	124180007	140000
2018	32	Tsering Nurboo	174080007	150000
			Total	*670000*
2019	33	Baloji Adothu	154110020	150000
2019	34	K Thonbamliu	164083007	140000
2019	35	Sukesh Kashiram Tumram	154020004	150000
2019	36	Bipul Pegu	134080012	140000

2019	37	Kevezai Tureng	144080014	70000
			Total	*650000*
2020	38	Gamit Harshal Girishbhai	164170005	150000
			Total	*150000*
			Grand Total	*3342950*

Indian Institute of Technology Bombay

Office of the Registrar

No. REG/L-10/2021
03.12.2021

To
Shri P. J. Soundararajan
Under Secretary (IITs)
Department of Higher Education
Ministry of Education
428-C, Shastri Bhavan,
New Delhi – 110001.

Subject: **Provisionally Admitted Lok Sabha starred Question Diary No. 3300 for answer on 06.12.2021 regarding Students Migrated Abroad After Completing Course**

Dear Sir,

With reference to your email dated 29.11.2021 on the subject cited above the requisite information pertaining to IIT Bombay is furnished below:

a) **Whether the Government has data of such students who have migrated abroad after receiving education from IITs and Government Medical Institutions during the last five years, year-wise;**

➢ We do not have any exact data on how many graduates migrate abroad. However, the number has come down significantly over the last 10-15 years. The number of migration would be about 3 to 5% and several of them after earning higher degrees return to India.

b) **Whether it is a fact that the said students received personnel benefit by getting education from the Government-aided institutions;**

➢ Students of IIT do not receive any personal benefit. But they get an intellectual lift and develop a sharp analytical skill that our graduates continue to leverage for the rest of their life.

c) **If so, whether the Government is contemplating to make any such provision that the students receiving education from a Government institution, are bound to provide compulsory service in the country for at least 10-15 years after completing their studies; and**

➢ NA

d) **If so, the details thereof?**

➢ NA

Yours Sincerely,

Sd/-

REGISTRAR

New study reveals how effectively the novel coronavirus spreads through coughs
Researchers study the spread of a cough cloud containing SARS-CoV-2.

Photo by Divyanshi Verma via Unsplash

Infected airborne respiratory droplets play a significant role in the spread of the coronavirus, formally known as SARS-CoV-2. The widespread use of respiratory masks has curbed the spread of the virus and brought down the number of people affected by the disease. But, as the pandemic rages on, general fatigue in following the behavioural restrictions has set among the public. Festive gatherings continue to be celebrated, and governments across the world have had a difficult time convincing people to adhere to the safety guidelines. In such a scenario, it is crucial to understand how the virus-carrying fluid particles carried by a person's cough or sneeze spreads through the ambient air.

Researchers had earlier found that the speed of a cloud of cough containing the airborne virus decreases as it travels away from the mouth. In a recent study, researchers from the Indian Institute of Technology Bombay (IIT Bombay) have used this finding to mathematically formulate the cloud's spread through moist air in an enclosed area. The study was published in the journal *Physics of Fluids*.

The researchers found that the virus' spread is independent of who coughs and how vigorously. The volume of air eventually covered by the cough cloud does not depend on the initial speed

with which it is ejected. The mathematical calculation revealed that the volume depends on the distance the cough travels from the mouth and its sidelong spread. "These dependencies arise because the cloud traps air from the surroundings as it evolves," says Prof Rajneesh Bhardwaj, one of the authors of the study.

By analysing the equations of flow for the cough, the researchers found that a large volume of ambient air slowly gets trapped inside the cloud as it spreads out. With time, the droplet concentration inside the cloud thus reduces significantly from its initial concentration. Since the virus requires liquid droplets to survive, the possibility of its spread declines. They also found that the front of the cough cloud covers the first two metres of its total distance from the source within two seconds of being emitted. Hence, the cloud has the maximum probability of spreading the viral liquid immediately after release.

The calculations also enabled the researchers to quantify the effect of masks precisely. Masks reduce the net distance covered by the cloud by blocking it before its spread, earlier experiments have revealed. The researchers now compared the effect of surgical masks and clinical N95 masks on the volume of the cloud. While the cloud remains effective till about 8 seconds before dissipating irrespective of whether the person is masked or not, surgical masks reduce the volume by seven times compared to having no mask. N95 masks perform much better, decreasing it by as much as 23 fold. This quantitative estimate sheds a clear light on why masks have been so effective in curbing the spread. "In case a person is not using a mask while coughing, it is possible to reduce the spread by simply blocking the mouth with a palm or an elbow," says Prof Amit Agrawal, the other author of the study.

The researchers also calculated the effect of temperature and humidity of ambient air on the cloud's spread. They found that the cloud's temperature and humidity, which depends on the temperature, decrease over the distance of its spread. However, its humidity stays higher than the humidity of the ambient air till the end, as the cloud entraps water vapour from its surroundings.

"Only during the course of the pandemic have people realised the importance of studying coughing and sneezing in the context of disease transmission," says Prof Agrawal. While the data related to coughing has been generated only recently, another team is already conducting experiments on sneezing, and the researchers will use these results to consider the effects of sneezing. "Such a study will help us determine the maximum number of people that can be safely accommodated in a hospital ward," adds Prof Bhardwaj.

Moreover, the airflow in the surroundings may change how a cough or sneeze evolves, for example, if there is a strong wind in the room. Although conducting detailed experiments in such flow conditions is not easy, work is in full swing. Once the results start coming in, the researchers will modify their findings considering additional practical situations. "This will enable us to study the minimum rate at which air in a room, elevator, cinema hall, car, aircraft

cabin, or restaurant needs to be circulated to maintain freshness and reduce the chances of infection," signs off Prof Agrawal.

Author(s) of the research/study	Amit Agrawal and Rajneesh Bhardwaj — Department of Mechanical Engineering, Indian Institute of Technology Bombay
Contact email	amit.agrawal@iitb.ac.in ; rajneesh.bhardwaj@iitb.ac.in
Title of the study	Reducing chances of COVID-19 infection by a cough cloud in a closed space
Bibliographic Info	Reducing chances of COVID-19 infection by a cough cloud in a closed space; Physics of Fluids, 32, 10 (2020) 101704
DOI	https://doi.org/10.1063/5.0029186
Funding Information	\<not provided\>
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Social Media Handles of the researcher(s)	Twitter: Instagram: Facebook: LinkedIn:
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Vetted/Unvetted	Vetted

Press Release on Webinar on R&D at IIT Bombay for COVID-19 mitigation

As a response to the challenges posed by the ongoing COVID-19 pandemic, Indian Institute of Technology Bombay (IIT Bombay) has been collaborating with hospitals and industry partners to find solutions and mitigate problems. Researchers at IIT Bombay have offered their expertise towards developing medical devices, sterilisation methods, antiviral supplements, software solutions and many other scientific interventions to help deal with the direct and indirect effects of the pandemic.

On 1 August, 2020, Industrial Research and Consultancy Centre (IRCC), Office of Dean (R&D) at IIT Bombay organised a half-day webinar where the researchers involved in the COVID-19 mitigation efforts spoke about the progress made over the last few months. The webinar was attended by over a hundred people, including students, scientists, industry personnel, medical professionals and government officials. During the session, talks were presented by faculty speakers from IIT Bombay and the industry and entrepreneurs from start-ups incubated at Society for Innovation and Entrepreneurship (SINE, Technology Business Incubator of IIT Bombay).

	Prof. Ramesh Kumar Singh Mechanical Engineering		**Prof. Soham Mujumdar** Mechanical Engineering
	Dr. R. R. Sonde Executive VP - Research Technology & Innovation, Thermax		**Prof. Rinti Banerjee** Biosciences and Bioengineering
	Prof. Ganesh Ramakrishnan Computer Science & Engineering		**Prof. Manjesh K. Hanawal** Industrial Engineering and Operations Research
	Prof. Kiran Kondabagil Biosciences and Bioengineering		**Prof. Manoj Gopalkrishnan** Electrical Engineering
	Prof. Ambarish Kunwar Biosciences and Bioengineering		**Prof. B. Ravi** Mechanical Engineering
	Dr. Anirvan Chatterjee HaystackAnalytics, SINE incubatee		**Mr. Bharadwaj K. S. S.** Endimension Technology, SINE incubatee

List of speakers for the COVID-19 webinar

Prof Milind D. Atrey, Dean (Research and Development), opened the session and commended the IIT Bombay professors and researchers for rising to the challenge and coming up with strategies to deal with the outcomes of COVID-19. Initially, the researchers had been given seed grants to get started, and seven patents and ten technology licenses have been granted so far.

"R&D at IIT Bombay strives to develop a vibrant industry-academia symbiosis to ensure innovations and technologies developed in the laboratories reach the society at large," said Prof Atrey. Over the last few months, about 20 industry collaborations have been forged, and there are ongoing talks with 40 industries for licensing. Prof Atrey urged more enterprises to get involved to ensure that the technology developed in the research labs reach the public.
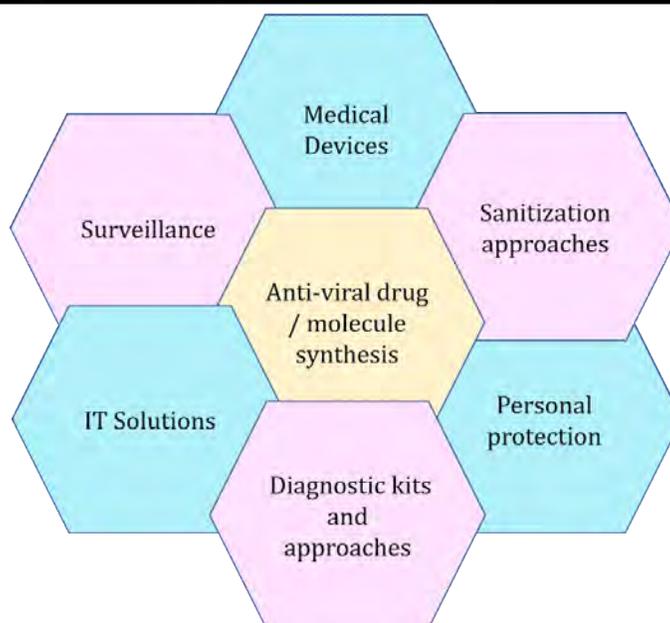
Research areas of COVID-19 related work at IIT Bombay

"IIT Bombay is at the forefront of technology-driven solutions to overcome the COVID 19 pandemic. With decisive support from our government and industry collaborators, we have undertaken more than 30 COVID-19 related R&D projects in multiple domains with promising results. We are determined to continue development and deployment of different technologies to improve India's response to the COVID-19 outbreak," said Prof Subhasis Chaudhuri, Director IIT Bombay. He talked about the broad research areas such as palliative care and curative solutions that have been the focus of COVID-19 efforts at IIT Bombay.

Addressing the participants from the industries, Prof Chaudhuri hoped to see more interaction between the researchers and industries, stressing that IIT Bombay is always trying to find new ways to collaborate with industries.

The session was moderated by Prof A M Pradeep, Associate Dean(R&D), who introduced the speakers and conveyed the questions posed by the audience during the webinar.

Prof Ramesh Kumar Singh, Prof Soham Mujumdar, Prof Ankit Jain and their team (Department of Mechanical Engineering) have been working with Dr R. R. Sonde from Thermax Global on designing a non-invasive ventilation (NIV) system for ensuring a continuous supply of oxygen to patients infected with COVID-19. The flow rate of air supply can be adjusted, and the device takes away the need to intubate the patient. "It is a safer alternative to face masks in patients with acute respiratory failure," said Prof Singh.

Airhood designed by Prof Ramesh Singh and team

The device resembles a helmet and provides the patient with a clear view of their surroundings. It is completely sealed so that the medical personnel are not exposed to any droplets carrying the virus. The air exhaled by the patient is filtered before discharging to ensure that it's free of any pathogens. The device can also be used with any commercial ventilator, although the researchers advise that ventilators should be reserved for critical patients.

Over several iterations of the design, the team has ensured that the final prototype is ergonomic and comfortable to wear. They have verified that there is no accumulation of carbon dioxide

inside the device using computer simulations of the airflow within. The patient will be able to comfortably breathe while wearing the device and will not experience any sense of suffocation. "Since the device is not clamped on your face, it is suitable for long term use," said Prof Singh.

Dr Sonde from Thermax Global, the manufacturing partner for this project, said that the device will be available as a product within four months and would cost under INR 5000.

As the next step, by 15 August, the researchers have plans to try out the device on healthy patients to check its comfort. Then, they will be collaborating with Tata Memorial Center, Mumbai, to test the device on COVID-19 patients.

Prof Rinti Banerjee (Department of Biosciences and Bioengineering) has been leading the efforts to develop a range of products such as nutritional supplements, therapeutic agents, antiviral coatings and alcohol-free sanitisers that can fortify against COVID-19 infection. Her team has fabricated a wash-resistant, antibacterial and antiviral coating for textiles called 'DURAPROT'^{TM} that has been applied over textiles such as masks and personal protective equipment(PPE). DURAPROT^{TM} enabled masks have been licensed and commercialised by Meemansa and Ants Innovations as industry partners.

Two versions of masks coated with DURAPROT^{TM}, developed by Prof Rinti Banerjee and team have been commercialised by industry partners

The coating material is safe and environmentally friendly. The coating has shown complete inactivation of the novel coronavirus. DURAPROTt^{TM} enabled masks are self-disinfecting, reusable and have been validated according to ASTM and ISO standards for antiviral properties, breathability and antibacterial effects. As a social initiative, the team has also been partnering with self-help groups through state rural livelihood missions and NGOs to train them in making these advanced functionality masks. DURAPROT^{TM} technology is also being used for functional

textiles, textile-based consumer products, sportswear and accessories, and is being licensed by multiple partners.

An advanced version of the DURAPROT^{TM} technology namely DURAPROT PLUS^{TM} has also been developed. These masks meet all ASTM, ISO and WHO standards for N95 masks and surgical masks, and are self disinfecting, affordable and re-usable.

The team has also formulated two spice-based formulations. One is a dietary nutraceutical made of FSSAI approved constituents, and another is an ayurvedic therapeutic based on PICOVRID^{TM} technology, that has shown to have antiviral, immune boosting and anti-inflammatory benefits. Swabs of COVID-19 patients from Kasturba Hospital for Infectious Diseases, Mumbai, treated with PICOVRID^{TM} were neutralised in an hour. Animal models that were given a dose of the compound showed reduced IL6 levels in the lungs and the cytokine storm as seen in pneumonitis complications associated with COVID-19.

PICOVRID^{TM} is available as nutraceuticals and ayurvedic formulations in the formats of syrup, gel, capsules, fruit beverages, herbal water, flavored milk, herbal yogurts and herbal teas. The product has been GMP manufactured in FSSAI and AYUSH approved facilities and is ready for licensing. Clinical trials have also been planned for the technologies.


PICOVRID^{TM} and NANOSURF^{TM} formulations developed by Prof Rinti Banerjee and team are available for licensing

Prof Banerjee and her team have also developed NANOSURF^{TM}, a pharmaceutical compound consisting of GRAS approved actives, which is helpful in tackling severe complications of

COVID-19 including acute respiratory distress syndrome(ARDS). The technology has been granted Indian and US patents, and works both as a pulmonary surfactant and an anti-inflammatory drug reducing the cytokine storm and alveolar protein leakage associated with ARDS complications of COVID-19. Regulatory toxicology and stability in accordance with industry standards has been established. Aerosol and oral formulations are available as liquid and lyophilised forms for licensing. Next, the researchers plan to conduct clinical trials for emergency use.

The researchers have also developed ECORSANI^{TM}, a range of alcohol-free herbal sanitisers and surface disinfectants, which can inactivate the novel coronavirus. In accordance with ASTM standards, ECORSANI^{TM} based alcohol-free sanitisers kill more than 99.9% germs within 20 seconds. The technology has been licensed to Life Essentials. Further, licensing is available for various forms of the technology as hand, surface and aerosol disinfectants, fruit and vegetable sanitisers, coatings for surfaces, additives for paints and packaging, as well as mouthwashes.

Prof Manjesh Kumar Hanawal (Industrial Engineering and Operations Research) and Prof Ganesh Ramakrishnan (Department of Computer Science & Engineering) have been working on a COVID-19 contact tracking platform called 'Corontine' for tracking asymptomatic individuals. People suspected to be infected with the novel coronavirus would have to download the application and register through their smartphone. The app sends out the GPS coordinates of the person from their phone to the authorities. It is designed to help them to ensure that infected and asymptomatic persons follow quarantine guidelines and move around only in the approved areas within a safe distance.
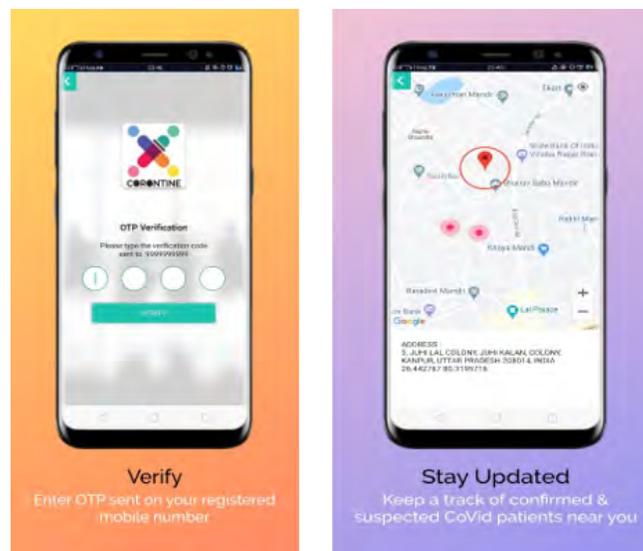

Quarantine, contact tracking app by Prof Manjesh Kumar Hanawal, Prof Ganesh Ramakrishnan and team

In this framework, only the people assigned as the authorised body for a particular local area will have access to the data from individuals in that area, thus ensuring strict privacy controls. Corontine application has been widely used in the state of Meghalaya. The Orissa Government has used some aspects of the platform to implement its COVID-19 tracking system.

The team has also developed a volunteer-run call centre platform, called Happy-to-help, through which they help people in installing Maha Kavach, a COVID-19 contact tracing app deployed by the Maharashtra government.

Moreover, the researchers are developing CampusHelp, a Bluetooth-based application for contact tracing. It can be used in universities to alert students who are on campus when they come in contact with a person who has tested positive for COVID-19. Currently, the team is seeking funding partners to deploy the app on a larger scale.

The Corontine platform can also be used in healthcare applications for monitoring vital parameters. It is being used with i_Wrist devices developed by Prof. Maryam Shojaei to measure vital parameters like temperature, pulse rate, oxygen levels and blood pressure, which are collected by the Corontine app through Bluetooth. The parameters can then be centrally monitored to keep a check on the health status of the patients. This helps health workers in observing a large number of patients and attending to those requiring critical care. The team is seeking funding and industry partnership for large scale production of i_Wrist.
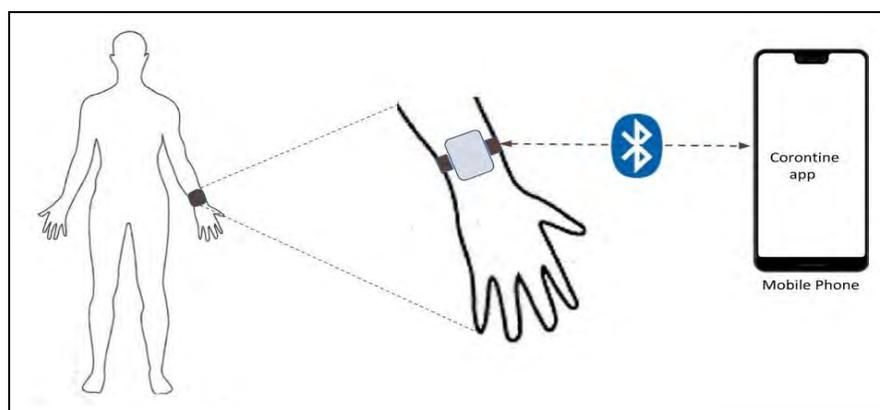
Using i_Wrist device with the Corontine app

Prof Ganesh Ramakrishnan has also been involved in developing Lokacart, an e-commerce software platform aimed towards helping small-scale enterprises and farmers supplying necessities, such as fruits, vegetables and household goods, to connect with the consumers and bringing self-dependence and self-reliance in today's struggling economy and supporting the

momentum of "Vocal for Local". They are working in collaboration with Mr Ashvin Gami, MD, ITAakash Strategic Software Pvt Ltd, an IIT Bombay alumni and with guidance from Prof. Narendra Shah (CTARA, IIT Bombay). "The application is not trying to be a middle, but rather provides an easy platform to connect consumers to the seller directly, providing the convenience of comfort as well as the trust of known buyers and sellers," explains Prof Ramakrishnan.
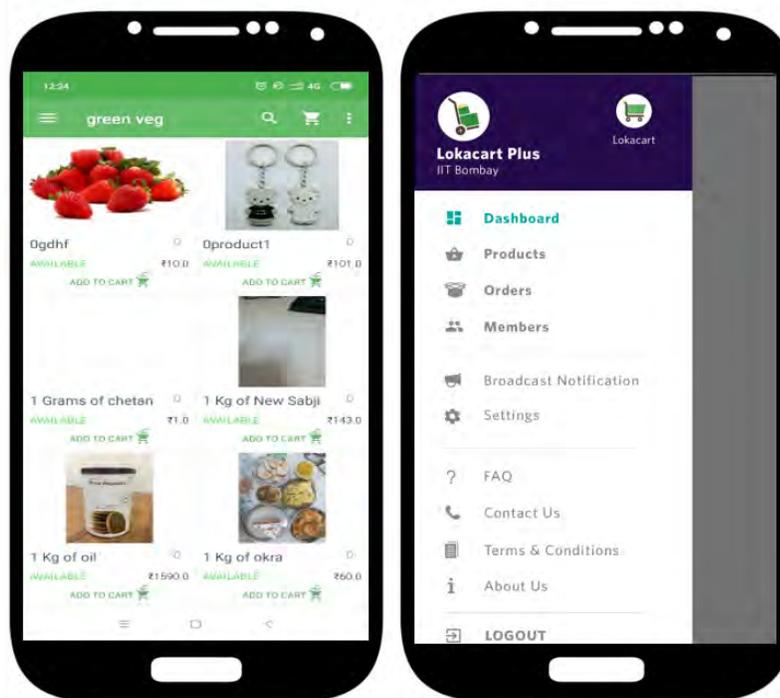
Lokacart, retail platform by Prof Ganesh Ramakrishnan and team

The platform automates the process of receiving orders, bill generation and delivery processing through mobile. The buyer can select the products and place an order from the store with which they have registered. The seller keeps an account of orders and stock of the products and the consumer keeps track of orders and billing and ensuring delivery.

The following two features of transparency provide Lokacart a distinct advantage among buyers and sellers: (i) complete control to the seller on what to sell, at what price to sell and to whom to sell through the admin app (as well as web interface), and (ii) complete control to the buyer on whom to buy from, through the buyer app. That's easy Ecommerce!

The story behind the Lokacart app and the testimonials of its success are available in this article. The platform is currently available in Marathi and English, and will soon be available in more Indian languages. Three versions of the platform are available on Google Play Store that caters to different stakeholders: sellers, buyers and buyers interested in bulk purchases and one version of Lokacart app is available on iOS for buyers. "So far, 194 vendors are using the platform to cater

to thousands of consumers," said Prof Ramakrishnan. IIT Bombay is happy to announce the transfer of the technology to ITAakash Strategic Software Pvt Ltd under an exclusive license agreement. ITAakash Strategic Software Pvt Ltd will be taking the product to the market at a wider scale.

Prof Kiran Kondabagil (Department of Biosciences and Bioengineering) and his team are developing a nasal gel that can be used to inactivate the novel coronavirus as it enters the nasal cavity. Prof Kondabagil explained that most COVID-19 infections happen from inhaling and ingesting the novel coronavirus. "Most of the drugs being developed to treat COVID-19 are taken after the patient is exposed to the virus. The nasal spray we are developing is a non-invasive alternative without the need to ingest any drugs," he said. The team is currently developing methods to test the capture and inactivation of the virus using the spray.

The team is also working on testing wastewater samples for the presence of the virus. This method can be used as a low-cost tool to track the samples detected with COVID-19 back to the source of infection and alert that community.

Prof Sanjeeva Srivastava (Department of Biosciences and Bioengineering) is involved in identifying the proteins linked to COVID-19 infection from nasal swab samples using mass spectrometry. It is simpler to prepare samples through their method compared to the more prevalent RT-PCR testing. The test can discern specific SARS-CoV-2 proteins in COVID-19 patients, and has been able to identify proteins related to the virus in recovered patients, which was not detected by RT-PCR. This method is currently being validated and might be used to screen asymptomatic persons.

The team is also working to identify the molecular pathways that are altered in the COVID-19 infected patients from their nasal swab samples. This can help the clinicians in planning appropriate therapy to treat the infection, and can also aid in predicting the severity as the disease progresses.

Prof Manoj Gopalkrishnan (Department of Electrical Engineering) and his team have worked on an algorithm that can provide guidance for pooling samples from patients using statistical modelling for COVID-19 detection. Currently, samples collected from a set of people are pooled together and tested for the presence of the novel coronavirus. If the test is negative, the whole group is pronounced COVID negative. If the test is positive, the individual samples are tested further to find the infected person. But, the hospital has to wait for the results from the first stage of the test to proceed further, and meanwhile, any asymptomatic people might have spread the virus.

In the method developed by Prof Gopalkrishnan and team, samples from the same individual are tested in multiple pools at once. Based on all the results, the algorithm zeroes in on the individual who has tested positive across multiple tests as carrying the infection. This method makes the testing timeline shorter and provides a quicker screening platform.

The researchers have tested over 2000 samples using this method, and there are more clinical trials going on at Malabar Cancer Centre, Thalassery, Institute For Stem Cell Science and Regenerative Medicine(InStem), Bengaluru, and Tata Memorial Center, Mumbai. They have built a web app as well as an android app. They envision this method could be used in places where thousands of people have to be screened very quickly such as universities, workplaces and movie theatres, as well as in testing labs.

Prof Ambarish Kunwar (Department of Biosciences and Bioengineering) and his fellow researchers have built a portable sterilisation device and a germicidal cabinet that uses ultraviolet(UV) light to eliminate pathogens including the novel coronavirus. Within 3 minutes of exposure, these devices can almost completely eliminate the virus present on small objects such as mobile phones.


UV germicidal cabinet designed by Prof Ambarish Kunwar and team

The team has also designed a wheeled sterilisation unit that can sanitise a larger area within a radius of 1 meter when exposed to UV light for around 15 minutes. All three devices are currently being used in IIT Bombay Hospital. They are in talks with industry partners to produce the device on a larger scale. So far, a non-exclusive license has been given to one company.

The researchers have also received funding from Wadhwani Research Centre for Bioengineering at IIT Bombay for the development of a robotic sterilisation unit that can be utilised for sterilising hospitals and public transport systems such as buses.

Further, the team has developed a prototype of a portable and rechargeable car sanitiser. "This can be stored in the trunk of your car, and can also be used in ambulances," said Prof Kunwar. His team has also developed a Safe Biohazard Transporter which can be used for inactivation, transport and safe disposal of biohazards such as used masks. The transporter is currently being used by Proteomic Laboratory of Prof Sanjeeva Srivastava to carry inactivated COVID-19 samples from hospital to the research lab. In parallel, the team is providing its expertise to industries on developing various UV sterilisation devices and their testing.

Prof B Ravi (Department of Mechanical Engineering) has been coordinating efforts from Biomedical Engineering & Technology Innovation Centre (BETIC) in developing novel medical devices. They have designed a smart stethoscope equipped with Bluetooth that can transmit sounds from a patient's chest to the clinician's earpiece inside PPE, thereby preventing the need for physical contact. Several clinicians are currently using the smart stethoscope manufactured by Ayu Devices, a startup who have licensed the technology from IIT Bombay.
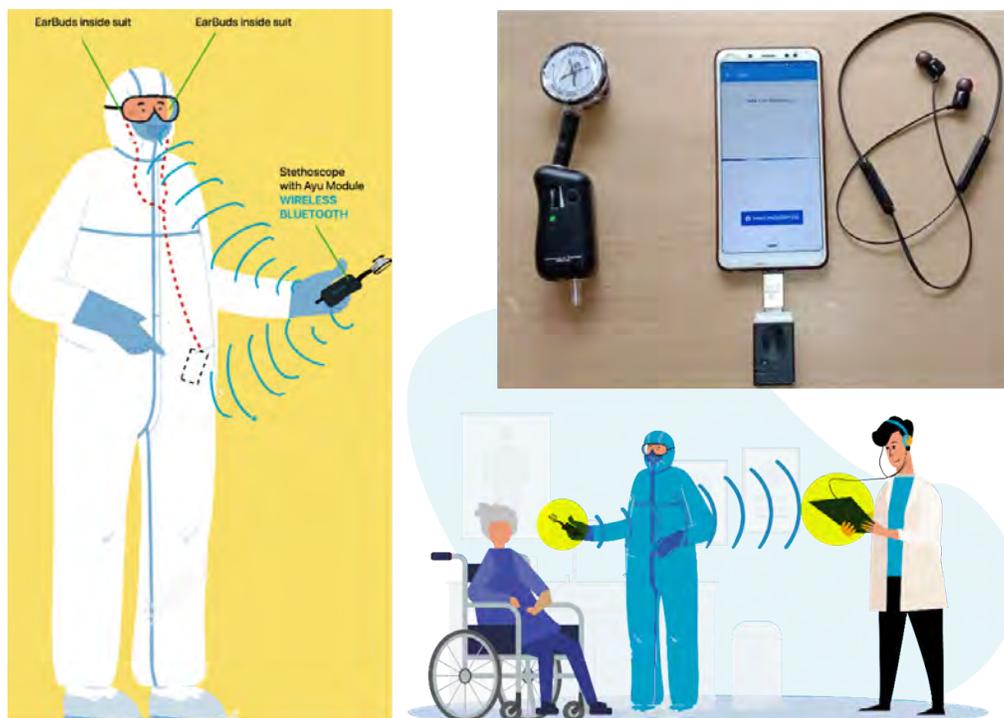
Contactless auscultation by smart stethoscope developed at BETIC

The Ayu Devices team also developed a smart COVID OPD booth with a glass barrier for clinicians to examine patients and take swab samples without touching. Fifteen booths have been installed in various hospitals across Mumbai, including Cama & Albless, Cooper, HHSB Thackerey, Nair, Rajawadi, Sion, and St. George.

"The facilities and ISO 13485 certified process of BETIC enable validating the clinical needs, translating research prototypes into commercially viable products, obtaining the necessary regulatory clearances, and technology licensing to industry partners. The process has been adapted by several other engineering and medical institutes," says Prof Ravi.

Two startups spawned at BETIC cell of COE Pune include MediAsha, who have developed disposable face masks, shields and hoods, and Atmen Technovention, who have developed an endo-tracheal tube blockage detector. Another startup OKO Icare from VNIT Nagpur cell developed contactless hand sanitiser that can also be equipped with a thermal scanner. The IIT Bombay team is currently engaged in developing an ICU ventilator, which has reached testing phase.

Smart COVID-19 booth developed by Ayu Devices

Two start-ups incubated by Society for Innovation and Entrepreneurship (SINE), HaystackAnalytics led by Dr Anirvan Chatterjee and Endimension Technology led by Mr Bharadwaj KSS, have also been involved in providing technology solutions to the COVID-19 pandemic.

The team at HaystackAnalytics is building a real-time testing system to analyse the genetic data of patient samples to check for the presence of the novel coronavirus. They have validated their results using global genomic datasets. In this platform, around 96 samples can be tested in every

4 hours, with an estimated cost of INR 2500 per sample. The system can be deployed at workplaces to ensure that there is no transmission of the COVID-19 infection.

Mr Bharadwaj's team at Endimension Technology is developing artificial intelligence methods to detect abnormalities associated with COVID-19 infection from chest scans. In hospitals with a large number of COVID positive cases, the software can help sort the patients according to the severity of the risk, ensuring that they receive appropriate treatment.

"Since most hospitals are equipped to take chest X-rays which cost less than INR 150, this method provides a low-cost diagnostic solution," said Mr Bharadwaj. The system can also be used to monitor how the patient is responding to treatment. The AI platform is ready to deploy, and the team is awaiting partnerships with clinicians to validate their results.

In closing, Prof A. K. Suresh, former Deputy Director (AIA) and former Convener of COVID-19 Task Force at IIT Bombay, summarised the salient points of each research work mentioned in the webinar. He congratulated the researchers for making rapid progress in their work over the last four months. He also applauded the government agencies for fast-tracking grants and the industries for quickly forging collaboration on the various projects.

More details and updates on all the R&D activities around COVID-19 taken up by IIT Bombay can be found here.

No. REG/L-10/2021
03.12.2021

To
Shri P. J. Soundararajan
Under Secretary (IITs)
Department of Higher Education
Ministry of Education
428-C, Shastri Bhavan,
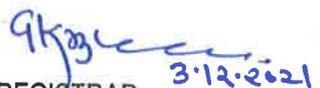New Delhi – 110001.

Subject: **Provisionally Admitted Lok Sabha starred Question Diary No. 3300 for answer on 06.12.2021 regarding Students Migrated Abroad After Completing Course**

Dear Sir,

With reference to your email dated 29.11.2021 on the subject cited above the requisite information pertaining to IIT Bombay is furnished below:

a) **Whether the Government has data of such students who have migrated abroad after receiving education from IITs and Government Medical Institutions during the last five years, year-wise;**

➢ We do not have any exact data on how many graduates migrate abroad. However, the number has come down significantly over the last 10-15 years. The number of migration would be about 3 to 5% and several of them after earning higher degrees return to India.

b) **Whether it is a fact that the said students received personnel benefit by getting education from the Government-aided institutions;**

➢ Students of IIT do not receive any personal benefit. But they get an intellectual lift and develop a sharp analytical skill that our graduates continue to leverage for the rest of their life.

c) **If so, whether the Government is contemplating to make any such provision that the students receiving education from a Government institution, are bound to provide compulsory service in the country for at least 10-15 years after completing their studies; and**

➢ NA

d) **If so, the details thereof?**

➢ NA

Yours Sincerely,

REGISTRAR   3.12.2021

To
Shri P.J. Soundararajan
Under Secretary (IITs)
Department of Higher Education
Ministry of Education,
428-C, Shastri Bhavan,
New Delhi – 110011.

Subject: **Provisionally Admitted Lok Sabha Unstarred Question Diary No. 7522 for answer on 20.12.2021 regarding"Recruitment in IITs"**.

Sir,

With reference to your email dated 10.12.2021 to the Director IIT Bombay on the subject cited above, placed below the requisite information pertaining to IIT Bombay for your kind reference and necessary action.

(a) The details of IITs which have issued notifications for faculty recruitment in 2020 and 2021;

Sr. No.	Year	Details of Advt.
1	2020	Advt. No.G1/2020, June 2020
2	2021	Advt. No.G9/2021 January 2021
3	2021	Advt. No.H-3/2021-22,, September 2021
4	2021	Advt. No.H-25/2021-22, October 2021

(b) The details posts for which recruitment notifications are issued IIT-wise

Sr. No.	Year	Details of Advt.	Rolling (Yes/No)	Position	Remark
1	2020	Advt. No.G1/2020, June 2020	Yes	Assistant Professor	-
2	2021	Advt. No.G9/2021 January 2021	No	Professor and Associate Professor	-
3	2021	Advt. No.H-3/2021-22, September 2021	No	Assistant Professor	Recruitment for Reserved category under MMR
4	2021	Advt. No.H-25/2021-22, October 2021	Yes	Assistant Professor	-

(c) Whether the notifications contain details of number of vacancies reserved;

&

(d) If so, the details thereof, IIT-wise; and

Sr. No.	Year	Details of Advt.	Rolling (Yes/No)	Position	No. of Posts	No. of vacancies reserved
1	2020	Advt. No.G1/2020, June 2020	Yes	Assistant Professor	Minimum of 100	As per GoI rules
2	2021	Advt. No.G9/2021 January 2021	No	Professor and Associate Professor	Not mentioned	Not mentioned
3	2021	Advt. No.H-3/2021-22, September 2021	No	Assistant Professor	50	50
4	2021	Advt. No.H-25/2021-22, October 2021	Yes	Assistant Professor	Not mentioned	As per GoI rules

(e) The details of posts which have backlog and recruitment do not take place, IIT-wise?

Ans: IIT Bombay have a few backlog vacancies for which recruitment process is going on.

Yours Faithfully,

Sd/-
Officiating REGISTRAR