



भारतीय प्रौद्योगिकी संस्थान इन्दौर  
सिमरोल, खंडवा रोड, इन्दौर - 453 552

Indian Institute of Technology Indore  
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IIT Indore

IITI/RO/13/2020/40

February 18, 2020

**Mr. P.J. Soundararajan**

Under Secretary (IITs)  
Ministry Human Resource Development,  
Department of Higher Education,  
428-C, Shastri Bhawan,  
New Delhi - 1100111

**Subject: Assurance given to Lok Sabha Unstarred Question No. 2790 raised by Shri OM Birla, MP on 'Court Cases by and against Government Departments' to be answered on 06.08.2015-reg.**

Sir,

I am to invite a reference to your e-mail dated January 28, 2020 on the above subject and to furnish the requisite information in respect of IIT Indore as stated below:

1. The details of pending Court cases, if any, among IITs and the mechanism available for avoiding such court cases.

**Reply:** There are 03 cases in High Court and 06 cases in District and Lower courts pending as on date in which IIT Indore in party (Details are placed annexure). Students, Faculty and Staff can raise their grievances before appropriate forums such as Director, Senate and BoG. Institute tries to resolve all the grievances as per rules.

2. The alternative dispute (ADR) for disposal of such cases.

**Reply:** As stated above, the Institute tries to resolve all the disputes by way of meeting, reconciliation and negotiation.

3. The number of cases in which the action was taken under and Section 80 CPC during the notice period.

**Reply:** There is no case of Section 80 CPC.

Thanking you

Yours sincerely

(S. P. Hota)

Registrar (I/c)

Registrar in-Charge  
IIT INDORE

Annexure

Details of Court Cases in which IIT Indore is party

Sl No.	Court	Case No.	Opposite party	Remarks
1-	M.P. High Court Indore Bench	WP 1023/2018	Mr. Kishan Vidhani	Admission matter
2-	M.P. High Court Indore Bench	WP 11525/2018	Mr. Neeraj Kumar	Service matter
3-	M.P. High Court Indore Bench	WP 27479/2019	Mr. Shyam Singh	Student matter
4-	District Court Mhow	Civil Suit 100A/2019	Mr. Mohan	These are civil cases regarding boundary dispute
5-	District Court Mhow	Civil Suit 99A/2019	Ms. Lakshmi Bai	
6-	District Court Mhow	Civil Suit 101A/2019	Mr. Mahesh	
7-	District Court Mhow	Civil Suit 94A/2019	Mr. Balram	
8-	District Court Mhow	Civil Suit 163A/2018	Mr. Nandram & others	
9-	District Court Indore	RCT/7650/19	P.S. Tejaji Nagar	Institute vehicle accident case





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IIT Indore

IITI/RO/13/2019/259

November 11, 2019

Mr. P.J. Soundararajan  
Under Secretary (IITs)  
Ministry Human Resource Development  
Department of Higher Education  
428-C, Shastri Bhawan,  
New Delhi - 1100111

**Subject: Lok Sabha Starred Question Diary No. 9 to be answered on 18.11.2019 regarding STEM.'**

Sir,

I am to invite a reference to your e-mail dated November 8, 2019 on the above subject and to furnish the requisite information in respect of IIT Indore as stated below:

Sl.No.	Query	Reply for IIT Indore
(a)	The percentage of women and students from backward castes enrolled across various fields of study, including but not limited to Science, Technology, Engineering and mathematics (STEM) at the undergraduate and postgraduate levels:	Enrolled in the Academic Year 2019-2020 <b>Women: 24%</b> <b>Backward Caste: 27%</b>
(b)	The percentage of backward caste students and women students in the top 5 universities as per the National Institute Ranking Framework:	Out of total strength of students studying as on 9-11-2019 <b>Backward Caste: 27%</b> <b>Women: 19%</b>
(c)	The drop out rates among backward caste and women students at the level of undergraduate and postgraduate levels: and	Out of total enrolled students of backward caste and women students as on 9-11-2019 <b>Backward Caste: 3.3%</b> <b>Women: 5.5%</b>
(d)	If the academic performance of women and students from backward caste is at par with other students?	Yes

Thanking you

Yours sincerely

  
Registrar (I/c)  
Registrar In-Charge  
IIT INDORE

**INDIAN INSTITUTES OF TECHNOLOGY (IITs)**

LSUS Diary No. 13025 for 28.09.2020 regarding "Innovative Researches Conducted by IITs"

S.No.	Name of the IIT	Part (a)				Part (b) & (c)	Part (d) & (e)
		Please give details for the last 3 years 2017, 2018, 2019 and also for 2020				If, yes give details	
12	IIT Indore	Sl No	Title of research or Innovation	Brief description (How it benefits the common man)	Year of research/ innovation		
	IIT Indore	1	Self enegised vigilant system for the conservation of wild life and tribal people	The main objective of the project is to protect to safe the tribal peopl from the wild animal, and prevent wild animals from attacking their crops. This self enegized system had a wind mill in it, which makes it self enegised, It creaytes a crackling sound with light so that it can keep the wlid life awaya	2017		
	IIT Indore	2	Soil Moisture Sensing Device	Soil moisture sensors measures soil moisture at the root zone and regulates the existing conventional irrigation timer, resulting in considerable water saving when installed and used properly. A customized soil water limit is set allowing for dryer or wetter soil conditions.	2017		
	IIT Indore	3	Space Weather and Space Plasma Simulations	Additionally, important aspects about the impact of most powerful events on the sun like Coronal mass ejections (CMEs) have the potential to disrupt and/or interfere with satellites orbiting earth. This could lead to communication black-outs that can hamper society in the present age of rapid communications. In DAASE, computational modelling research on study of CME and its impact on Earth's magneto-sphere aims to provide an indigenou space weather prediction framework that will benefit in taking pre-emptive steps to ensure minimal damage to satellites to salvage loss of communication	2017		
	IIT Indore	4	Statistical Inference	The research related to Cosmology, Large Scale Structures, Radio Astronomy and Compact Object and Transient Science undertaken at the DAASE involves drawing statistical inference from the humongous amount of observational and simulated data. The statistical tools developed in this process (involving Bayesian statistics, Artificial Neural Network etc.) have direct application in various kinds of social and economical surveys conducted by the Government and NonGovernment organizations to assess the impact of different social development projects run by the government. The accurate statistical inference of surveys can help the union and state governments to customize different social development schemes according to the necessities of specific demography. The time series analysis and prediction employed for variabilities in astronomical data in these research groups can be extremely beneficial for financial analysis and trend prediction related to social projects involving economic growth, weather prediction among many others. DAASE is involved in not developing new modules of applications of these statistical inference but also training future generations of scientists and engineers with such skills. This is very much in line with Government of India's "Skill India" initiative.	2017		

	IIT Indore	5	Catalysts for transformation of biomass waste to furan dicarboxylic acid as a precursor for bio-based plastic materials	<ul style="list-style-type: none"> <li>· Efficient catalyst and catalytic process for the transformation of biomass waste to furan dicarboxylic acid</li> <li>· furan dicarboxylic acid is an important substitute for terephthalic acid in bio-based plastic materials</li> <li>· This process works at mild condition using air at atmospheric pressure over a cost effective catalyst in water.</li> </ul> <p>* This work has been published in ChemCatChem, 2017, 9, 2760-2767, and Inorg. Chem. Front., 2017, 4, 871-880</p>	2017		
	IIT Indore	6	Smart urinals	These are urinals developed by piezo electric nano generators, these are energy efficient, this device takes care of the water conservation.	2018		
	IIT Indore	7	Energy harvester from fluttering flag	The main objective of this project is harvest energy from the freely moving bodies like flags etc. This technology will be highly useful to tap energy in the reserved environment	2018		
	IIT Indore	8	Light weight heat sink	Heat sinks are employed in different electronic device to dissipate the heat generated from the devices. These heat sinks increase the weight and the cost of the system. Present innovation of light weight heat sink has made the electronic devices lighter and cheaper for the common man. Also, it has reduced the chances of failure of the electronic devices.	2018		
	IIT Indore	9	Modified double pipe heat exchanger	The main aim of this innovation is to increase the efficiency of renewable energy systems. Efforts have been made to increase the heat transfer rate between the fluids in the heat exchangers with various corrugation techniques. Increase in efficiency of renewable energy system will in turn reduce the cost of energy utilized by the common man.	2018		
	IIT Indore	10	Climate Change	The focus of this research is to understand and forecast extreme weather events such as thunderstorms and cloud burst. Thunderstorms and lightning are major extreme weather events that are supposed to increase in number and intensity due to climate change. It is however, very little understood how and to what extent it will happen. The present work aims to (i) develop new techniques to forecast of thunderstorms by using NavIC satellite signal, (ii) estimate and quantify the climate change effect by identifying most vulnerable regions and (iii) improve the quantitative precipitation estimation by radar and satellite sensors.	2018		
	IIT Indore	11	Universal Planter Machine	Developed a universal planter machine solving all the planting needs of the farmer. The Machine developed is easily manufacturable by farmers in the remote area with the facilities available to them. It can plant seeds as well as saplings at variable depth and row-row distance.	2018		
	IIT Indore	12	Advanced Electrical Energy Storage (Beyond Li-ion battery): Light-weight, binder-free thin-film cathode for high performance rechargeable, low-cost Al-ion battery.	Considering ever increasing global power requirement and the limitations of present-day lithium-ion devices, e.g., the high cost, limited lithium resources in the earth's crust, reliability and safety issues, sodium-ion, magnesium-ion and aluminum-ion batteries, as alternative energy storage systems have attracted significant attention as the post-lithium systems. Among these systems, due to the low cost, higher safety, low-flammability, lower reactivity, environmental friendliness and natural abundance of aluminium (Al), the Al-ion battery, as a new efficient electrical energy storage device, has displayed excellent prospects. (The research work on this finding was going on from 2015-2018, at IIT Indore)	2018		

	IIT Indore	13	Development and evaluation of therapeutic efficacy of novel <i>Escherichia coli</i> asparaginase for the treatment of childhood acute lymphatic leukemia.	<p>Acute Lymphoblastic Leukemia (ALL) is a type of cancer that affects blood, bone marrow and lymphoid system which are all known as hematological neoplasms. <i>E. coli</i> L-asparaginase (EcA) used as the central component in the combinatorial chemotherapy for ALL and markedly improves the overall survival of ALL. However, repeated EcA administration leads to immunogenicity, hypersensitivity, pancreatitis and thromboembolism. Since asparaginase is recognized as a foreign body by the human immune system, formation of anti-drug antibody (ADAs) also neutralizes the enzyme activity. Additionally, EcA also enzymatically deamidates L-glutamine which leads to ketonic hyperglycinemia, hypocholesterolemia, glycosuria, hepatotoxicity and prolonged bleeding time. Less favourable treatment outcomes in ALL has been linked with the association of asparaginase treatment discontinuation and failure to receive the full treatment protocol due to the asparaginase related toxicities. Thus, there is a need for the generation of novel enzyme with reduced side effects. To overcome above drawbacks, we used protein engineering approach to create several EcA variants with amino acid replacement at subunit interfaces and B-cell epitopes. Some of these variants were found to be more active, less antigenic, and more cytotoxic towards the blast cells leaving the healthy cells unaffected and also with reduced glutaminase activity. Moreover, less immunogenic EcA variants did not bind to pre-existing antibodies present in the immunized mice and serum obtained from ALL patients undergoing asparaginase treatment. In vivo preclinical and pharmacokinetic studies of these mutants showed significant improved properties than the commercially available asparaginase drugs. We believe that these desirable and improved properties of the enzyme will lead to development of effective therapy for the treatment of both</p>	2018		
	IIT Indore	14	Development of a novel enzyme based processing aid for the reduction of acrylamide in thermally processed food products.	<p>Acrylamide (or acrylic amide), a chemical compound which considered as carcinogenic for animals and humans. It is often formed in cooking of starchy foods. During heating, the amino acid asparagine, naturally present in starchy foods, undergoes a process called Maillard reaction, which is responsible for giving baked or fried foods their brown color, crust, and toasted flavor. The occurrence of considerable amounts of acrylamide in variety of baked, fried and oven prepared common foods were reported and this resulted in world-wide concern. It is known that acrylamide formation in heated food products can be reduced by treating food materials with asparaginase enzyme before the heat treatment. As a food processing aid, asparaginase can reduce the formation of acrylamide in a range of starchy foods without changing taste and appearance of the end food product. Although the known asparaginase enzymes can catalyze the conversion of asparagine to aspartic acid in thermal processing of food materials, these enzymes are not suitable for certain applications wherein the enzyme is required to exhibit asparaginase activity at higher temperature and increased alkaline pH conditions. Here we have identified and replaced amino acids in the dimer-dimer interface of <i>E. coli</i> L-asparaginase (EcA), which exhibited higher thermo tolerance properties, improved enzymatic activity at higher temperature and showed broad range of pH stability during the processing of food materials. This EcA mutant exhibited higher asparaginase activity at a temperature ranging from 50°C to 90°C and at a pH ranging from 5 to 10 in comparison to wild type EcA. Moreover, the initial conversion of acrylamide and acrylamide quantification in French fries and buns have shown tremendous potential of reduction (close to 85% reduction) in EcA mutant treated samples compare to the untreated samples processed under standard</p>	2018		
	IIT Indore	15					

	IIT Indore	16	Synthetic jet for electronic cooling	Artificially made jets are impinged over the electronic devices in this research work. These jets can provide a high local heat transfer coefficient at a low flow rate with low acoustics and high reliability. Synthetic jet saves the energy, increase compactness and reliability of the electronic devices used by common man.	2019		
	IIT Indore	17	Catalysts for transformation of biomass waste to fuel components	<ul style="list-style-type: none"> <li>Efficient catalyst and catalytic process for the transformation of biomass waste to fuel components</li> <li>This process works at room temperature using hydrogen gas at atmospheric pressure over a cost effective catalyst in water.</li> </ul> <p>* This work has been published in ACS Sustainable Chem. Eng., 2019, 7, 9352-9359</p>	2019		
	IIT Indore	18	Algorithm development for Socio-Physical Modelling	<p>Researchers in DAASE are involved in developing algorithms for accurately and efficiently solving stochastic differential equations that govern the socio-physical systems and finance. Similar algorithms are crucial to understand the role of turbulence in particle acceleration in space plasmas. In the current age, where social media has become an integral part of the system, it is important to understand the dynamics through numerical modelling. Such models play a crucial role in understanding opinion formation (e.g. analysis of EU referendum in the UK 2016, State and National elections in India) and also in finance. Researchers in DAASE are also involved in Resource Allocation Optimization using Machine Learning algorithms.</p>	2019		
	IIT Indore	19	Optical Biosensing Platform based on Nanocomposite	<p>Optical detection remains a favorable choice for the label-free detection of various bio samples including diseased cells, viral infections and bacteria. A cost-effective yet fast method for biosensing is the need of the time. We have developed a nano-optical platform with photocatalytic nanocomposites for biosensing applications. The nanocomposite prepared by cost-effective sol gel process is embedded into a nano-optical structure with nanofabrication technology. The optical device with its electrical tuning because of the nanocomposite is shown to provide efficient detection of foodborne pathogen, a serious health hazard. (Optoelectronic Nanodevice Research Laboratory, Department of Electrical Engineering, IIT Indore)</p>	2019		
	IIT Indore	20	SAMAGRA Process Documentation: UNICEF and IIT Indore Joint Research Project	<p>Aiming for all the 17 Sustainable Development Goals (SDGs) of the United Nations requires more than the usual verve from all kinds of agents, including the governments, civil society and the non-governmental bodies. SamagraSamajik Suraksha Mission (SSSM) of the Government of Madhya Pradesh is one such innovative step towards increasing the inclusivity of the poor and marginalized people of the state in the welfare schemes run by the government with the help of its web-based portal called 'Samagra'. The collaborative project of IIT Indore and UNICEF in consultation with the Department of Social Justice, Govt of MP was tasked with evaluation of the reach and effectiveness of the SAMAGRA platform. The report with our results and recommendations was published and launched as a public UN document in 2019.</p>	2019		

	IIT Indore	21	Landslide hazard assessment & monitoring Of the chibo pashyar (kalimpong) using wireless sensor network	The research was focused on developing rainfall thresholds and field monitoring system for Chibo-Pashyor region in Kalimpong, a highly susceptible landslide zone in the Darjeeling Himalayas. The rainfall thresholds were developed based on empirical, probabilistic, hydrological and physically based approaches and were validated using field monitoring. For field monitoring, tilt sensors and volumetric water content sensors were used and the data can be transmitted using a wireless network in real time. The method is useful in developing landslide early warning system for the region with rainfall thresholds as first line of action and field monitoring for verification and issuing warnings	2019		
	IIT Indore	22	Standalone portable apparatus for automatically measuring blood pressure with remote monitoring	The instrument provide a portable apparatus for measuring blood pressure of the individual based on korotkoff method, this enables remote and schedule monitoring of blood pressure.	2019		
	IIT Indore	23	Nano-hetero architectures for perovskite solar cell	The innovation has the potential to replace expensive photovoltaics with cheap counterparts. On completion of this project, we will be a step closer to practically implement low-cost photovoltaics, making it affordable to all sections of society. The outcomes of the project have a direct impact on weakening oil dependence, improving air quality, providing sustainable energy sources and creating job opportunities. The project will also create a budding initiative to shape awareness about carbon emission and green energy among the mass population.	2019		
	IIT Indore	24	IOT enabled geyser control system	The Internet of things (IoT) is the extension of Internet connectivity into physical devices and everyday objects. Embedded with electronics, Internet connectivity, and other forms of hardware (such as sensors), these devices can communicate and interact with others over the Internet, and they can be remotely monitored and controlled During the winters, one generally has to wait for hot water for various purposes. This project is based on the idea of implementing the concept of IoT in the water geysers using a mobile phone.	2019		
	IIT Indore	25	Design and Development of an Automated Surveillance System for the Melghat Tiger Reserve	In this project we have made an endeavour to address two issues. The first issue is that of early detection of fires in the Melghat Tiger Reserve. The current means of fire detection comprises the use of forest guards who walk around the jungle and run back to the base station on spotting a fire. This results in wastage of a few hours of very crucial time. The endeavour is to set up a Wireless Sensor Network (WSN) to automatically detect fires and communicate the same to the back end systems in a matter of seconds. The second endeavour is towards development of a self energised system for automatically detecting the entry of wild animals into areas of human settlements without hurting the animals in any way. This is a clean and cost effective way of resolving	2019		
	IIT Indore	26	Design and development of air purifier cum CO <sub>2</sub> harnesser “सृजन: Air purifier cum CO <sub>2</sub> harnesser”	<ul style="list-style-type: none"> <li>· Air purifying and CO<sub>2</sub> capture from the environment.</li> <li>· The machine can reduce the particulate matter (from PM 70) to negligible amount available in the air.</li> <li>· The initial prototype has already developed for air purification.</li> <li>· The optimization of CO<sub>2</sub> scrubbing module is going on.</li> </ul> <p>* The project has been selected for MSME Business Incubation at IIT Indore</p>	2020		



	IIT Indore	27	Development of Metal-Organic Framework MIL-53(AL) from the waste aluminum foil and plastic bottle	<ul style="list-style-type: none"> <li>MOF (MIL-53(AL) synthesized from waste PET bottle (drinking and beverage) and aluminum foil.</li> <li>The synthesized MOF is useful for various chemical and environmental applications.</li> <li>The MIL-53(AL) has superior CO<sub>2</sub> adsorption capacity (13 wt%) at room temperature.</li> </ul> <p>* The research work has been accepted in the Journal of Chemical Education.</p>	2020		
	IIT Indore	28	Design and development of carbon black for printer cartridge from waste tissue paper	<ul style="list-style-type: none"> <li>A large amount of carbon black was made from carbonization of the waste tissue papers and are used to make printer cartridge by adding additives</li> </ul>	2020		
	IIT Indore	29	Catalysts for low temperature hydrogen production	<ul style="list-style-type: none"> <li>Efficient catalyst and catalytic process has been developed to produce hydrogen at low temperature.</li> <li>Hydrogen is produced from biomass based alcohols</li> <li>This methodology is much suitable for "on-demand hydrogen production" application</li> </ul> <p>* A patent has been filed on this work (Patent Application No. 201921040586)</p>	2020		
	IIT Indore	30	Covid-19	The departments of Biosciences & Biomedical Engineering and Electrical Engineering jointly are working on the development of sterilization chamber. The chamber will be using 254 nm ultra-violet (UV) rays to sterilize personal objects i.e. mobile phone, wallet, etc. of duty-bound police, doctors, and associated personnel. This is being done on the request of Shree Vivek Sharma, IG of Indore Zone.	2020-21		
	IIT Indore	31	Covid-19	Dr. I. A. Palani and Dr. Indrasen Singh, faculties in Mechanical Engineering, are working towards developing customized 3D printed reusable masks having a provision to have reusable filters and straps. These 3D printing is done on the fabrics and they will have a provision to be cleaned and reused. Few masks are already printed for trial purposes. In addition, the group is also in the process of developing customizable mask based on the different face features of an individuals.	2020-21		
	IIT Indore	32	Covid-19	Dr. Vipul Singh, faculty in Electrical Engineering, Dr. I. A. Palani from Mechanical Engineering and Dr. Abhishek Srivastava from Computer Science and Engineering are working on the development on Shape Memory Alloy based optical temperature sensor for sensing the body temperature. This device can be fitted into the fabric of the patient and the body temperature can be continuously monitored without physical contact or thermometer or thermal scanner. The group is working on the process to further enhance the resolution of the sensor to continuously monitor the body temperature and make it an IOT enabled system, so that the doctors can monitor the patient's temperature even at remote locations.	2020-21		
	IIT Indore	33	Covid-19	Dr. Vipul Singh is also working on the development of UV-C LEDs and UV-C photodetectors for disinfection of surfaces/ PPEs against COVID-19 and other pathogens. The exposure to UV-C radiations is known to kill and inactivate pathogens by destroying their nucleic acids by disrupting their DNA.	2020-21		
	IIT Indore	34	Covid-19	Prof. Sandeep Choudhary of Civil Engineering and Dr. Rajesh Kumar of Physics are working on the development of self-illuminating fluorescent bricks and coatings for UV Disinfection Building Chambers to disinfect the passenger luggage. This will be done by converting existing concrete buildings into closed UV chambers by completely packing the openings (doors, windows, and ventilators) to avoid the exposure of UV light.	2020-21		

	IIT Indore	35	Covid-19	Dr. Amit Kumar, faculty in Biosciences and Biomedical Engineering has been scrutinizing the SARS-CoV-2 protein information for the designing an effective vaccine encompassing both the T-cell and B-cell epitopes. He and his group has screened all the proteins of SARS-CoV-2 to search for the patches that can be used for immunity generation against this pathogen. These patches were thoroughly analyzed by using various computational tools to generate a model vaccine candidate having a propensity to elicit protective immune response. The work is currently under peer review and represents preliminary data that can act as an initial platform for the rapid generation of an efficacious protective vaccine against SARS-CoV-2 infection.	2020-21		
	IIT Indore	36	Covid-19	Six research groups representing different countries i.e. India, Norway, Sweden, USA, France and Denmark have been invited to be a part of the International Network Research Project "Stopping Covid-19 Pandemic", funded by Norwegian Research Council. The Indian research group led by Dr. Avinash Sonawane, faculty in Biosciences and Biomedical Engineering at IIT Indore. The objectives of this project are to study Covid-19 virus interaction with human host cells, pathology of Covid-19 in human and identify susceptibility-resistance factors, Cloud computing, Machine Learning (ML) and artificial intelligence (AI) as tools to identify primary drivers of COVID-19 infection. The Indian Research Group will be studying on the Proteomic and antibody generation.	2020-21		
	IIT Indore	37	Covid-19	Designing of a novel fusion peptide as a preventive as well as therapeutic, agent against SARS-CoV-2 infection	2020-21		
	IIT Indore	38	Covid-19	Structure-based design of novel peptidomimetics targeting the SARS-CoV-2 spike protein Expected Outcome : The study is expected to explore novel peptide derivatives, which could inhibit the interaction of SARS-CoV-2 with ACE2 thereby blocking its Entry into the Host Cells.	2020-21		
	IIT Indore	39	Covid-19	Dual Targeting of 3CLpro and PLpro of SARS-CoV-2: A Novel Structure-Based Design Approach to treat COVID19 infection	2020-21		
	IIT Indore	40	Covid-19	Identification of a Potential Peptide Inhibitor of SARS-CoV-2 Targeting its Entry into the Host Cells	2020-21		
	IIT Indore	41	Covid-19	Development of sterilization chamber by faculty members from BSBE and Electrical Engineering using 254 nm ultra-violet (UV) rays to sterilize personal objects i.e. mobile phone, wallet, etc. of duty-bound police, doctors, and associated personnel.	2020-21		
	IIT Indore	42	Covid-19	.Development of Disinfection Tunnel using ICMR approved water-soluble biocompatible disinfectant	2020-21		
	IIT Indore	43	Covid-19	Development of UV based set up to deactivate Covid19 VIRUS	2020-21		
	IIT Indore	44	Covid-19	Working on the time dependent Mathematical Model based on the following parameters a)Total Population b)Susceptible Population c)Infected Population infected d)Undetected infected Population e)Expected recovery of quarantined population f)Recovered Population	2020-21		
	IIT Indore	45	Covid-19	Hand Sanitizer (as per WHO guidelines)	2020-21		
	IIT Indore	46	Covid-19	Experiments and lattice Boltzmann simulations of infectious virus transport in the air from humans	2020-21		
	IIT Indore	47	Covid-19	Computer-Aided Drug Discovery against COVID-19	2020-21		
	IIT Indore	48	Covid-19	Identifying Possible Potent Inhibitors against COVID-19 via Computational Drug Repurposing Study	2020-21		
	IIT Indore	49	Covid-19	Detection of Coronavirus using advanced machine learning techniques	2020-21		



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IIT Indore

No. IITI/RO/13/2020/105

September 21, 2020

Mr. P. J. Soundararajan  
Under Secretary (IITs)  
Ministry of Education,  
Department of Higher Education,  
428-C, Shastri Bhawan,  
New Delhi-110011

**Sub: RSUSQ No. 1316 for 22.09.2020.**

Dear Sir,

I am to invite a reference to your e-mail dated September 19, 2020 on the above-mentioned subject and to furnish the information in respect of IIT Indore:

- a) The research journal Classification used in research component of National Institutional Ranking Framework (NIRF) ranking for Management Institutions.

**Reply:** Not Applicable IIT

- a) The number of Indian Journals listed in these Classifications, category wise A, B C

**Reply:** A Category-2737

- b) The Number of Indian Researchers from Indian Institutes and Universities who have been published in A\* and A Category Journals

**Reply:** Total no. published in A\* and A Category Journals is 2737

- c) The Plans by the Ministry to encourage researchers to publish in Indian Journals so that the Indian Journals get higher classification leading to valuable IPR (intellectual Property Rights) for the Country?

**Reply:** IIT Indore has a mandatory policy that there should be 3 publications for each PhD Student and he same is being encouraged to publish in Indian Journals.

Thanking you

Yours sincerely,

  
(S.P. Hota)

Registrar I/c

Registrar in-Charge  
IIT INDORE

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**Reply: Rajya Sabha Unstarred Question Dairy No.14069 for answer on 29.09.2020 regarding "SC and St Development and Welfare"**

1 message

**Registrar Secretary** <registrar.secretary@iiti.ac.in>

Wed, Sep 23, 2020 at 9:39 AM

To: Pj Rajan &lt;pj.rajan@nic.in&gt;, "L RAGHAVENDRAN, Section Officer (TS-1) Dept. of Education"

&lt;lraghavendran.edu@nic.in&gt;

Cc: Registrar Iit &lt;registrar@iiti.ac.in&gt;, Joint Registrar F&amp;A &lt;drfa@iiti.ac.in&gt;, Roshan Bhatia &lt;roshanb@iiti.ac.in&gt;, P S Director &lt;psdirector@iiti.ac.in&gt;

Sir,

With reference to the trailing mail, the requisite information in respect of IIT Indore is as follows:

(a) the funds allocated (Revised Estimates) versus funds utilised (Actual Expenditure) for SC and ST Development and welfare of each IIT from FY 2015-16 onwards;

**Reply:** Excel Sheet Attached

(b) the break-up of the fund allocation (Revised Estimates) versus funds utilized (Actual Expenditure) for SC and ST development and welfare of each IIT and the subheads under which it was sanctioned, released, or utilised in financial year from FY 2015 onwards;

**Reply:** Excel Sheet Attached

(c) whether the expenditure for the scholarship of IIT students belonging to SC and ST category is included in this?

**Reply:** YES

Submitted for your kind information please.

Thanking you

With sincere regards,

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----- Forwarded message -----

From: **P J Soundararajan** <[pj.rajn@nic.in](mailto:pj.rajn@nic.in)>

Date: Mon, Sep 21, 2020 at 3:32 PM

Subject: Rajya Sabha Unstarred Question Dairy No.14069 for answer on 29.09.2020 regarding "SC and St Development and Welfare"

To: BHU (Varanasi) IIT- Director <[director@itbhu.ac.in](mailto:director@itbhu.ac.in)>, Bhilai IIT- Director <[director@iitbhilai.ac.in](mailto:director@iitbhilai.ac.in)>, Bhubneshwar IIT-Director <[director@iitbbs.ac.in](mailto:director@iitbbs.ac.in)>, Bombay IIT-Director <[director@iitb.ac.in](mailto:director@iitb.ac.in)>, Delhi IIT-Director <[director@admin.iitd.ac.in](mailto:director@admin.iitd.ac.in)>, Dharwad IIT-Director <[director@iitdh.ac.in](mailto:director@iitdh.ac.in)>, Gandhinagar IIT-Director <[director@iitgn.ac.in](mailto:director@iitgn.ac.in)>, Goa IIT-Director <[bk@iitgoa.ac.in](mailto:bk@iitgoa.ac.in)>, Guwahati IIT-Director <[director@iitg.ernet.in](mailto:director@iitg.ernet.in)>, Hyderabad IIT-Director <[director@iith.ac.in](mailto:director@iith.ac.in)>, ISM Dhanbad IIT-Director <[director@iitism.ac.in](mailto:director@iitism.ac.in)>, Indore IIT-Director <[director@iiti.ac.in](mailto:director@iiti.ac.in)>, Jammu IIT-Director <[director@iitjammu.ac.in](mailto:director@iitjammu.ac.in)>, Jodhpur IIT-Director <[director@iitj.ac.in](mailto:director@iitj.ac.in)>, Kanpur IIT-Director <[director@iitk.ac.in](mailto:director@iitk.ac.in)>, Kharagpur IIT-Director <[director@iitkgp.ernet.in](mailto:director@iitkgp.ernet.in)>, Madras IIT-Director <[director@iitm.ac.in](mailto:director@iitm.ac.in)>, Mandi IIT-Director <[director@iitmandi.ac.in](mailto:director@iitmandi.ac.in)>, Palakkad IIT-Director <[director\\_iitpkd@iitpkd.ac.in](mailto:director_iitpkd@iitpkd.ac.in)>, Patna IIT-Director <[director@iitp.ac.in](mailto:director@iitp.ac.in)>, Roorkee IIT-Director <[director@iitr.ernet.in](mailto:director@iitr.ernet.in)>, Ropar IIT-Director <[director@iitrpr.ac.in](mailto:director@iitrpr.ac.in)>, Tirupati IIT-Director <[director@iittp.ac.in](mailto:director@iittp.ac.in)>

Cc: BHU (Varanasi) IIT-Registrar <[registrar@iitbhu.ac.in](mailto:registrar@iitbhu.ac.in)>, Bhilai IIT- Director <[registrar@iitbhilai.ac.in](mailto:registrar@iitbhilai.ac.in)>, Bhubaneswar IIT-Registrar <[registrar@iitbbs.ac.in](mailto:registrar@iitbbs.ac.in)>, Bombay IIT-Registrar <[registrar@iitb.ac.in](mailto:registrar@iitb.ac.in)>, Delhi IIT-Registrar <[registrar@admin.iitd.ac.in](mailto:registrar@admin.iitd.ac.in)>, Dharwad IIT-Registrar <[registrar@iitdh.ac.in](mailto:registrar@iitdh.ac.in)>, Gandhinagar IIT-Registrar <[registrar@iitgn.ac.in](mailto:registrar@iitgn.ac.in)>, Goa IIT-Registrar <[registrar@iitgoa.ac.in](mailto:registrar@iitgoa.ac.in)>, Guwahati IIT-Registrar <[registrar@iitg.ernet.in](mailto:registrar@iitg.ernet.in)>, Hyderabad IIT-Registrar <[registrar@iith.ac.in](mailto:registrar@iith.ac.in)>, ISM Dhanbad Registrar <[registrar@iitism.ac.in](mailto:registrar@iitism.ac.in)>, Indore IIT-Registrar <[registrar@iiti.ac.in](mailto:registrar@iiti.ac.in)>, Jammu IIT - Registrar <[registrar@iitjammu.ac.in](mailto:registrar@iitjammu.ac.in)>, Jodhpur-IIT-Registrar <[registrar@iitj.ac.in](mailto:registrar@iitj.ac.in)>, Kanpur IIT-Registrar <[registrar@iitk.ac.in](mailto:registrar@iitk.ac.in)>, Kharagpur IIT-Registrar <[reg@hijli.iitkgp.ernet.in](mailto:reg@hijli.iitkgp.ernet.in)>, Madras IIT-Registrar <[registrar@iitm.ac.in](mailto:registrar@iitm.ac.in)>, Mandi IIT-Registrar <[registrar@iitmandi.ac.in](mailto:registrar@iitmandi.ac.in)>, Palakkad IIT-Registrar <[registrar@iitpkd.ac.in](mailto:registrar@iitpkd.ac.in)>, Patna IIT-Registrar <[registrar@iitp.ac.in](mailto:registrar@iitp.ac.in)>, Roorkee IIT-Registrar <[registrar@iitr.ac.in](mailto:registrar@iitr.ac.in)>, Ropar IIT-Registrar <[registrar@iitrpr.ac.in](mailto:registrar@iitrpr.ac.in)>, Tirupati IIT-Registrar <[registrar@iittp.ac.in](mailto:registrar@iittp.ac.in)>, PRASHANT AGARWAL <[prashant.ag@gov.in](mailto:prashant.ag@gov.in)>, L RAGHAVENDRAN, Section Officer (TS-1) Dept. of Education <[lraghavendrnan.edu@nic.in](mailto:lraghavendrnan.edu@nic.in)>, Mohit Gupta <[mohitgupta.edu@nic.in](mailto:mohitgupta.edu@nic.in)>, Arun Kumar Karn <[akkarn.edu@nic.in](mailto:akkarn.edu@nic.in)>, iitstechnicalsection1 <[iitstechnicalsection1@gmail.com](mailto:iitstechnicalsection1@gmail.com)>

Sir,

I am directed to attach herewith the Rajya Sabha Unstarred Question Dairy No.14069 for answer on 29.09.2020 regarding "SC and ST Development and Welfare" . The text of the Question reads as under :

- (a) the funds allocated (Revised Estimates) versus funds utilised (Actual Expenditure) for SC and ST Development and welfare of each IIT from FY 2015-16 onwards;
- (b) the break-up of the fund allocation (Revised Estimates) versus funds utilized (Actual Expenditure) for SC and ST development and welfare of each IIT and the subheads under which it was sanctioned, released, or utilised in financial year from FY 2015 onwards;
- (c) whether the expenditure for the scholarship of IIT students belonging to SC and ST category is included in this?

It is requested that the inputs for replying the above question may kindly be sent to this Ministry by 23.09.2020 positively on the email IDs [pj.rajn@gov.in](mailto:pj.rajn@gov.in) and [lraghavendrnan.edu@nic.in](mailto:lraghavendrnan.edu@nic.in) . Reply to Part (a) and (b) may please be sent in the **EXCEL Format** attached.

Regards / सादर,

P.J. Soundararajan / पा. जा. सौंदरराजन  
Under Secretary (IITs) / अवर सचिव  
Department of Higher Education / उच्चतर शिक्षा विभाग  
Ministry of Education / शिक्षा मंत्रालय

Government of India

Tele/दूर भाष : 011- 2338 1698



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 IIT Indore.xlsx  
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