

***Statement******Generation Performance during August to October, 2019***

Period	Generation during 2019-20 (MU)	Generation during 2018-19 (MU)	Growth (%)
August	106,200	105,793	0.39
September	105,195	108,328	-2.89
October	98,887	113,507	-12.88
April-October	757,946	749,314	1.15

**Patents filed by Indian Scientific Organisations**

1745. DR. SASMIT PATRA: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) the number of patents that have been filed by Indian Scientific Organisations/Institutions and how many have been granted over the past ten years, year-wise and organisation/institution-wise;

(b) the number of scientists/researchers who have been employed by Indian Scientific Organisations/Institutions presently and the total expenditure towards them, year-wise and organisation/ institution-wise; and

(c) the plans to improve the scientific research and development in India with special focus on innovation?

THE MINISTER OF SCIENCE AND TECHNOLOGY (DR. HARSH VARDHAN):

(a) The details on the number of patents that have been filed by Indian Scientific Organisations/ Institutions and how may have been granted over the past ten years, year-wise and organization/institution-wise are given in Statement-I (*See below*). (SOURCE : Controller General of Patent Design and Trade Marks, Mumbai).

(b) The number of Scientists/researchers who have been presently employed by the autonomous institutions of the three constituent Scientific Departments of the Ministry of Science and Technology *i.e.* Department of Science and Technology (DST), Department of Scientific and Industrial Research (DSIR) and Department of Bio-

Technology (DBT) and the total expenditure towards them, for the current financial year and organizations/ Institutions-wise is given in the Statement-II (*See below*).

(c) Ministry of Science and Technology is implementing several scientific Research and Development (R&D) programmes for providing special emphasis on innovation which include support to the Research and Development (R&D) labs and institutions, supports to Scientists and Researchers for investigators centric research proposal, strengthening science and technology (S&T) infrastructure in Universities and Institutions of Higher Educational Institutions (FIST), Promoting S&T Entrepreneurship and Innovation, Technology Business Incubators, Start Ups, Technology Development and Demonstration, empowering women and weaker sections of the society through science and innovations, Access to knowledge and studies (A2K + Studies) common Research and Technology Development hubs, Women's Technology Parks (WTP) , Promoting Innovations in Individuals Start-ups and MSME (PRISM), Supercomputing Mission, Clean Energy Research Initiative including solar, Water Technology Mission, Climate Change Programme, Biotechnology Research and Development, Industrial and Entrepreneurship Development, Industrial Bio technology parks, Bio pharm Scale-up Manufacturing in genome Valley, Biotechnology Translational Research Institute.

Ministry is also contributing in implementation of the National Intellectual Property Rights Policy-2016 of the country by providing facility to the Individual Researchers and Scientists from Academic sector to safe guarding their Intellectual property rights free of cost, which has led to accelerating the pace of innovation in the country.

#### ***Statement-I***

*Patent Applications Filed by and Patents Granted to Indian Scientific Organisations/institutions during 2009-2019 (up to 24-11-2019)*

Year	Patent Applications filed	Patents Granted during the year
1	2	3
2009	1063	790
2010	1229	497
2011	1379	242
2012	1728	244

1	2	3
2013	2058	167
2014	2315	255
2015	2486	328
2016	2436	436
2017	3035	609
2018	3710	645
2019 (up to 24-11-2019)	3761	876
TOTAL	25200	5089

*Patents Filed by Major Indian Scientific Organisations/institutions  
during 2009-2019 (upto 24-11-2019)*

Sl. No.	Name of Organisation	Applications Filed
1	2	3
1.	Council of Scientific & Industrial Research(CSIR)	2413
2.	Indian Institutes of Technology (IIT)	3751
3.	Indian Institute of Science (IISC)	408
4.	National Institutes of Technology	2016
5.	Defence Research & Development Organisation (DRDO)	998
6.	Indian Council of Agricultural Research (ICAR)	632
7.	Indian Space Research Organisation (ISRO)	165
8.	Hindustan Aeronautics Limited and related organisations	156
9.	Department of Biotechnology (DBT)	128
10.	Department of Electronics And Information Technology (DEITY) and Department of Information Technology (DIT)	134

1	2	3
11.	National Institute of Pharmaceutical Education & Research	117
12.	Indian Council of Medical Research	92
13.	Other R&D Institutes/Research Centres/ Departments Under Central Government.	1179
14.	Amity University	1104
15.	Samsung R&D Institute India- Bangalore Private Limited	1032
16.	Chandigarh University	417
17.	Bharath University and associate institutes	362
18.	Saveetha University and Associate Institutes	304
19.	Amrita Vishwa Vidyapeetham	138
20.	Shoolini University	292
21.	SRM University and Associate Institutes	289
22.	Chandigarh Group of Colleges (CGC)	285
23.	Hetero Research Foundation	245
24.	G. H. Raisoni College of Engineering, G. H. R. Labs and Research Centre	210
25.	Sandip University, Nashik & related institutes	210
26.	SAL Institute of Technology & Engineering Research	182
27.	Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology	159
28.	Sree Chitra Thirunal Institute For Medical Sciences And Technology	144
29.	M. S. Ramaiah University of Applied Sciences and related institutes	133

1	2	3
30.	Manipal University & related institutes	129
31.	Chitkara University	115
32.	Janardan Rai Nagar Rajasthan Vidyapeeth (deemed) University	104
33.	Other Universities/Academic Institutions/R & D - Technology Institutes/ Colleges etc.	7157
GRAND TOTAL		25200

*Patents Granted to Major Indian Scientific Organisations/  
institutions during 2009-2019 (upto 24-11-2019)*

Sl. No.	Name of Organisation	Patents Granted
1	2	3
1.	Council of Scientific & Industrial Research(CSIR)	1917
2.	Indian Institutes of Technology (IIT)	519
3.	Indian Institute of Science (IISC)	93
4.	Defence Research & Development Organisation (DRDO)	519
5.	Indian Council of Agricultural Research (ICAR)	146
6.	Indian Space Research Organisation (ISRO)	119
7.	National Institute of Pharmaceutical Education & Research	70
8.	Department of Biotechnology(DBT)	70
9.	Department of Electronics And Information Technology (DEITY) and Department of Information Technology (DIT)	35
10.	Indian Council of Medical Research	29
11.	Department of Science & Technology	25

1	2	3
12.	Centre for Development of Advanced Computing(C-DAC)	24
13.	Department of Atomic Energy	23
14.	National Research Development Corporation	23
15.	Central Council for Research in Unani Medicine	17
16.	National Institutes of Technology	11
17.	Other R&D Institutes/Research Centres/ Departments Under Central Government	186
18.	Samsung R&D Institute India- Bangalore Private Limited	260
19.	Suven Life Sciences Limited	34
20.	International Advanced Research Center For Powder Metallurgy And New Materials (ARCI)	33
21.	Aditya Birla Science And Technology	27
22.	Amity University	26
23.	Serum Institute of India Private Limited	27
24.	Reliance Life Science Private Limited	25
25.	Meril Life Sciences Pvt Ltd	24
26.	Sree Chitra Thirunal Institute For Medical Sciences And Technology	21
27.	Orchid Research Laboratories	20
28.	SCI-tech centre	19
29.	Hetero Research Foundation	18
30.	Jawaharlal Nehru Centre For Advanced Scientific Research	17
31.	Institute of Chemical Technology	16

1	2	3
32.	G.B. Pant University	14
33.	S N Bose National Centre For Basic Sciences, Kolkata	14
34.	Anna University	13
35.	Jubilant Life Sciences Limited	12
36.	Other Universities/Academic Institutions/R & D - Technology Institutes/ Colleges etc.	643
GRAND TOTAL		5089

***Statement-II***

*Organisation/Institution-wise details of Scientists/Researchers employed  
by three Scientific Departments of Ministry of Science and Technology  
and total expenditure towards them*

(₹ in crore)

Sl. No.	Organisations/ Departments Name	Number of Scientists/ Researchers at present on roll	Expenditure as on 28.11.2019 during F.Y. 2019-20
1.	DST	1129*	430.50
2.	DSIR/CSIR	3346	4083.57
3.	DBT	389	109.32
TOTAL		4864	4623.39

Departments releasing the grant for salary financial year wise.

\* DST data is based on the review statement 2018-19.

**KIRAN Scheme**

†1746. SHRI RAM SHAKAL: Will the Minister of SCIENCE AND TECHNOLOGY  
be pleased to state:

†Original notice of the question was received in Hindi.