

**GOVERNMENT OF INDIA  
MINISTRY OF COMMERCE & INDUSTRY  
DEPARTMENT FOR PROMOTION OF INDUSTRY AND INTERNAL TRADE**

**LOK SABHA**

**UNSTARRED QUESTION NO. 4623.  
TO BE ANSWERED ON WEDNESDAY, THE 24<sup>TH</sup> MARCH, 2021.**

**FILED AND APPROVED PATENTS**

**4623. SHRI JAYANT SINHA:**

Will the Minister of **COMMERCE AND INDUSTRY** be pleased to state:

**वाणिज्य एवं उद्योग मंत्री**

- (a) the number of patents filed and approved in the last five years, category-wise across various industries;
- (b) the number of patents filed and approved in the last five years, category-wise for start-ups;
- (c) whether there are any further incubation centres planned for start-ups across the country, including Jharkhand; and
- (d) if so, the details thereof?

**ANSWER**

**वाणिज्य एवं उद्योग मंत्रालय में राज्य मंत्री (श्री सोम प्रकाश)**

**THE MINISTER OF STATE IN THE MINISTRY OF COMMERCE & INDUSTRY  
(SHRI SOM PARKASH)**

- (a): The details of number of patents filed and approved in the last five years, category-wise across various industries is placed at Annexure-I.
- (b): The details of number of patents filed and approved in the last five years, category-wise for start-ups is placed at Annexure-II.
- (c) & (d): NITI Aayog launched Atal Innovation Mission (AIM) in 2016, which is Government of India's flagship initiative to promote a culture of innovation and entrepreneurship in the country. Towards this end, AIM has taken a holistic approach to ensure creation of a problem-solving innovative mindset in schools and an ecosystem of entrepreneurship in universities, research institutions, private and MSME sectors. All the initiatives of AIM are currently monitored and managed systematically using real-time MIS systems and dynamic dashboards.

To promote creation of a supportive ecosystem for start-ups and entrepreneurs, AIM has been establishing world class incubators called Atal Incubation Centres (AICs) in Universities, Institutions, Corporates,

etc. These AICs would foster to support world class innovative start-ups and help them scale and become sustainable enterprises. Till date, AIM has operationalized 68 Atal Incubation Centres with universities / institutions / private players and each AIC will foster creation of 40-50 Startups every four years. AICs support startups by providing technological facilities, initial growth funds, network and linkages, co-working space, lab facilities, mentoring and advisory support. They provide a platform for startups to able to receive funding from angel investors, Government organizations, economic-development coalitions, venture capitalists and other investors. The detail of the Atal Incubation Centres is placed at Annexure-III.

Further, Department of Science & Technology (DST) has been supporting setting up of Technology Business Incubators (TBI) in and around academic setups. These incubators provide incubation support to startups and innovative ventures by providing mentoring, technical support, funding support, IP protection guidance and hand holding. Out of a network of 155 TBIs, 1992 IPRs have been created including patents filed. These TBIs support startups in a vast range of technology sectors viz. Electronics, Information Technology, Healthcare, Medical devices, Biotechnology, Agritech, Artificial Intelligence, etc.

DST has also been supporting innovators and entrepreneurs with prototype grant under PRAYAS (Promoting and Accelerating Young and Aspiring innovators & Startups) program. Under the program, the patents filed and granted in different technology sectors during last five years is given below:

Domains / Category	Filed	Granted
Electronics, AR/VR, Mechatronics, ICT	43	11
Automobile, Transportation	21	3
Agritech, Foodtech	18	4
Energy, Cleantech, Water Management	39	4
Healthcare	47	8
Other (Manufacturing, Nano Technology, Sanitation etc)	21	5
Total	189	35

In 2020-21, DST has established new Technology Business Incubators in Punjab at IIT Ropar, Andhra Pradesh at Sri Vishnu College of Engineering and Chhattisgarh at NIT Raipur. There is no proposal for setting up of a Technology Business Incubator in Jharkhand.

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**ANNEXURE-I****ANNEXURE REFERRED TO IN REPLY TO PART (a) OF THE LOK SABHA  
UNSTARRED QUESTION NO. 4623 FOR ANSWER ON 24.03.2021.**

The number of patents filed and approved in the last five years, category-wise across various industries

(Table: 1)

Details of Application Filed						
Field As Per IPC	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21 (upto 28 Feb 2021)
BIOCHEMISTRY	718	700	784	722	687	738
BIOMEDICAL	1814	1547	2159	2616	3842	4331
BIOTECHNOLOGY	2164	1948	2278	2429	2685	3089
CHEMISTRY	8394	7152	8065	8080	8246	7880
CIVIL	706	700	761	807	861	708
COMMUNICATION	2457	2391	2478	4323	6444	5820
COMPUTER	4610	4157	4512	5107	6434	5738
ELECTRICAL	3292	3370	3735	4072	4122	3292
ELECTRONICS	5125	4856	5253	4626	5546	4817
FOOD	406	340	394	626	811	547
MECHANICAL	11715	13161	12483	11672	10763	8976
METALLURGY	830	741	725	824	904	761
PHYSICS	2611	2256	2263	2662	2733	2415
POLYMER	1379	1358	1291	1343	1429	1341
TEXTILE	683	767	673	750	760	778
<b>Total</b>	<b>46904</b>	<b>45444</b>	<b>47854</b>	<b>50659</b>	<b>56267</b>	<b>51231</b>

(Table: 2)

Details of Patents Granted						
Field As Per IPC	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21 (upto 28 Feb 2021)
BIOCHEMISTRY	65	81	137	210	295	337
BIOMEDICAL	134	236	221	623	964	747
BIOTECHNOLOGY	220	407	666	640	871	836
CHEMISTRY	1974	3211	4163	5242	6927	6293
CIVIL	60	122	128	188	293	374
COMMUNICATION	93	163	105	932	1598	1472
COMPUTER	233	396	490	565	1044	963
ELECTRICAL	363	528	783	1000	2174	1956
ELECTRONICS	884	1308	1390	1248	2613	2035
FOOD	40	74	110	112	165	161
MECHANICAL	1499	2110	2849	2492	4723	5307
METALLURGY	120	198	424	297	390	574
PHYSICS	228	308	617	713	1251	1057
POLYMER	298	592	764	754	1127	1755
TEXTILE	115	113	198	267	501	406
<b>Total</b>	<b>6326</b>	<b>9847</b>	<b>13045</b>	<b>15283</b>	<b>24936</b>	<b>24273</b>

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**ANNEXURE-II**

**ANNEXURE REFERRED TO IN REPLY TO PART (b) OF THE LOK SABHA  
UNSTARRED QUESTION NO. 4623 FOR ANSWER ON 24.03.2021.**

**The number of patents filed and approved in the last five years, category-wise for start-ups**  
(Table: 3)

<b>Startup Applications Filed (upto 28/02/2021)</b>					
<b>Field As Per IPC</b>	<b>FY 2016-17</b>	<b>FY 2017-18</b>	<b>FY 2018-19</b>	<b>FY 2019-20</b>	<b>FY 2020-21 (upto 28 Feb 2021)</b>
<b>BIOCHEMISTRY</b>	2	5	18	19	19
<b>BIOMEDICAL</b>	18	70	62	169	214
<b>BIOTECHNOLOGY</b>	11	25	53	46	101
<b>CHEMISTRY</b>	7	73	87	148	220
<b>CIVIL</b>	6	9	12	18	20
<b>COMMUNICATION</b>	10	29	51	151	84
<b>COMPUTER</b>	70	188	209	544	280
<b>ELECTRICAL</b>	10	46	92	115	118
<b>ELECTRONICS</b>	29	65	96	205	134
<b>FOOD</b>	1	15	30	37	33
<b>MECHANICAL</b>	31	140	187	276	260
<b>METALLURGY</b>	1	4	4	2	4
<b>PHYSICS</b>	14	31	59	84	72
<b>POLYMER</b>	1	8	5	17	17
<b>TEXTILE</b>	4	10	9	20	19
<b>Total</b>	<b>215</b>	<b>718</b>	<b>974</b>	<b>1851</b>	<b>1595</b>

(Table: 4)

<b>Startup Applications Granted (upto 28/02/2021)</b>					
<b>Field As Per IPC</b>	<b>FY 2016-17</b>	<b>FY 2017-18</b>	<b>FY 2018-19</b>	<b>FY 2019-20</b>	<b>FY 2020-21 (upto 28 Feb 2021)</b>
BIOCHEMISTRY			1		4
BIOMEDICAL		2	15	9	14
BIOTECHNOLOGY			8	6	10
CHEMISTRY		4	10	19	23
CIVIL			1	4	2
COMMUNICATION			1	1	5
COMPUTER		1	19	21	32
ELECTRICAL		1	10	12	19
ELECTRONICS		1	12	27	35
FOOD			1	2	2
MECHANICAL		4	19	79	47
METALLURGY			3	2	
PHYSICS		1	6	13	14
POLYMER			2		2
TEXTILE			2	1	6
<b>Total</b>		<b>14</b>	<b>110</b>	<b>196</b>	<b>215</b>

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### ANNEXURE-III

**ANNEXURE REFERRED TO IN REPLY TO PARTS (c) & (d) OF THE LOK SABHA UNSTARRED QUESTION NO. 4623 FOR ANSWER ON 24.03.2021.**

Sno	Name of Incubator	Sector	State	City	First Tranche Date
1	TREC STEP Tiruchirappalli Regional Engineering College Science and Technology Entrepreneurs Park	Manufacturing, Sector Agnostic	Tamil Nadu	Tiruchirappalli	15-Mar-17
2	Springboard Solutions Pvt. Ltd.	Sector agnostic	Delhi	South Delhi	20-Mar-17
3	Amrita Technology Business Incubator	Cyber Security, Networking, Telecom, Wireless, Mobile, Cloud Computing, Big Data	Kerala	Kollam	15-Mar-17
4	BioIncubator Centre at CCAMP	Bio Science Research	Karnataka	Bangalore	15-Mar-17
5	Access Livelihoods Consulting India Limited	Agriculture, Dairy and Handloom	Telangana	Hyderabad	15-Mar-17
6	NSRCEL, IIMB	Sector Agnostic, Social impact ventures, Women entrepreneurs	Karnataka	Bangalore Urban	28-Mar-17
7	Shiv Nadar AIC Research Foundation	Education, Health and Pharmaceuticals, New Materials including Nano Materials	Uttar Pradesh	Gautam Buddha Nagar	12-Sep-17
8	AIC - Aartech Solonics Pvt. Ltd.	Education, Health and Pharmaceuticals, New Materials, Manufacturing and Engineering	Madhya Pradesh	Raisen	12-Sep-17
9	AIC - Banasthali Vidyapith Foundation	Bio Technology, Renewable Energy, New Materials including Nano Materials	Rajasthan	Tonk	12-Sep-17
10	Atal Incubation Centre - BIMTECH	ICT, Water, Sanitation and Solid Waste Management	Uttar Pradesh	Gautam Buddha Nagar	12-Sep-17
11	Atal Incubation Centre @36INC Society	Sector agnostic	Chhattisgarh	Raipur	15-Jun-17
12	Atal Incubation Centre - Centre for Cellular and Molecular Biology	Bio Technology, Health and Pharmaceuticals	Telangana	Hyderabad	12-Sep-17
13	AIC-NIFT TEA Incubation Centre for Textiles and Apparels	Textile Manufacturing and Engineering	Tamil Nadu	Tiruppur	12-Sep-17

14	AIC - Sangam Innovation Foundation	Renewable Energy and Environmental sustainability	Delhi	South Delhi	05-Feb-18
15	AIC - SKU Confederation	Sector agnostic	Andhra Pradesh	Anantpur	15-Feb-18
16	AIC - LMCP Foundation	Bio Technology, Health and Pharmaceuticals	Gujarat	Ahmedabad	15-Feb-18
17	AIC - NMIMS Incubation Centre	Health and Pharmaceuticals, ICT, Manufacturing and Engineering	Maharashtra	Vileparle(West)	10-May-18
18	AIC - GIM Foundation	Sector agnostic	Goa	North Goa	25-Jun-18
19	AIC - RNTU Foundation	Education, Electricity, New and Renewable Energy and Environmental sustainability, ICT	Madhya Pradesh	Raisen	24-Sep-18
20	AIC - MUJ Incubation Foundation	Cleantech, New materials including Nano materials, other emerging areas of social and national importance, water sanitation and solid waste management	Rajasthan	Jaipur	24-Sep-18
21	AIC ISB Association	Education, Health and Pharmaceuticals, Manufacturing and Engineering	Punjab	Mohali	24-Sep-18
22	AIC – CCRI Foundation for Entrepreneurship Development	Coffee Production, Coffee Technology and Allied Fields, Other emerging areas or of social / national importance	Karnataka	Bangalore	20-Sep-18
23	AIC - Mahamana Foundation For Innovation and Entrepreneurship - IM-BHU	Agri & Allied, Green Infra, Public Health, Waste Management, Education, Technology, Finance, Water Management	Uttar Pradesh	Varanasi	28-Sep-18
24	AIC MIT ADT	Agri-tech, Social Enterprises + Biotech	Maharashtra	Pune	28-Sep-18
25	AIC - MCU Samvaad Bharati Foundation	Media & Communication	Madhya Pradesh	Bhopal	29-Sep-18
26	AIC - Prestige Inspire Foundation	Agri & Allied, ICT	Madhya Pradesh	Indore	28-Sep-18
27	AIC – SMU Technology Business Incubation Foundation	Fabrication, IoT, Assistive Technologies	Sikkim	Sikkim	28-Sep-18
28	Association of Lady Entrepreneurs of India	Agri-Allied, Bio Technology, Electricity, Cleantech, ICT, Manufacturing and	Telangana	Hyderabad	29-Sep-18

		Engineering, Other emerging areas or of social / national importance, Water, Sanitation and Solid Waste Management, Alternative Textiles, Food Processing and Biodegradable Packaging			
29	Amity Technology Incubator	AI and Automation, Bio Technology, ICT, Micro and Nano electronics, Sensor Technology	Uttar Pradesh	Gautam Buddha Nagar	06-Sep-18
30	AIC - Pinnacle Entrepreneurship Forum	Smart mobility, Social innovations	Maharashtra	Pune	28-Sep-18
31	AIC - GISC Foundation	Bio Technology Health and Pharmaceuticals, IoT, Deep technology(ML, AI, VR, VD)	Gujarat	Ahmedabad	03-Jan-19
32	AIC-AAU Incubator	Agriculture and Allied fields	Assam	Jorhat	18-Mar-19
33	AIC-Great Lakes Balachandran Foundation	Energy, Fintech, Edutech, Healthcare, Agritech - AI/ML	Tamilnadu	Chennai	25-Mar-19
34	AIC-IIITH FOUNDATION	Agriculture and Allied fields Electricity New & Renewable Energy, ICT	Telangana	Hyderabad	25-Mar-19
35	AIC Jyothy Institute of Technology Foundation	Societal, Environmental and Defence, Material, Affordable Medical devices, Foodtech, Nano Biotechnology, Cell Molecular Biology, Plant & Microbial technology, Computational engineering, Water, Thermal Engineering, Ancient Indian Sciences, Remote Sensing, VLSI, Autonomous Systems, Material Tribology	Karnataka	Bangalore	14-Mar-19
36	AIC - JKLU Foundation	Cleantech	Rajasthan	Jaipur	18-Mar-19

37	AIC Pondicherry Engineering College Foundation	Information & Communication Technology (ICT), Manufacturing Engineering, IoT, Unmanned aerial vehicles	Pondicherry	Pondicherry	14-Mar-19
38	AIC- ADT Baramati Foundation	Agriculture and Allied Fields Bio Technology Education	Maharashtra	Pune	25-Mar-19
39	AIC - Rambhau Mhalgi Prabodhini Foundation	Grassroot Technologies, other areas of social importance	Maharashtra	Thane	14-Mar-19
40	AIC ISE Foundation	Health & Pharma, Chemical, sectors of social importance	Gujarat	Mehsana	04-Feb-19
41	AIC - EMPI Incubation Foundation	Education, Cleantech, ICT, Sensor Technology, Water, Sanitation and Solid Waste Management	Delhi	Delhi	05-Feb-19
42	AIC- IIIT Kottayam Foundation	Electricity, New and Renewable Energy and Environmental sustainability Housing - Urban and Rural Information & Communication Technology (ICT) Other emerging areas or of social / national importance Sensor Technology Water, Sanitation and Solid Waste Management, Transportation	Kerala	Kottayam	16-Apr-19
43	AIC – NCORE DEVELOPMENTAL IMPACT FOUNDATION	Agriculture and Allied Fields, Bio Technology, Education, Electricity, New and Renewable Energy and Environmental sustainability, Health and Pharmaceuticals, Information & Communication Technology (ICT), Manufacturing and Engineering, Other emerging areas or of social / national importance, Sensor	Karnataka	Bangalore	16-Apr-19



		Technology Transport Water, Sanitation and Solid Waste Management			
44	AIC - RAISE Foundation	Social Entrepreneurship	Tamil Nadu	Coimbatore	16-Apr-19
45	SID	Agri-Allied, AI, Bio Technology, Education, Electricity, Cleantech, Health and Pharmaceuticals, Micro and nano electronics, New Materials including Nano Materials, Other emerging areas or of social / national importance, Sensor Technology, Water, Sanitation and Solid Waste Management, Space, Aerospace, Oil & Natural Gas Exploration	Karnataka	Bangalore	16-Apr-19
46	AIC-AMTZ MEDI VALLEY INCUBATION COUNCIL	Medical Devices Manufacturing & Engineering	Andhra Pradesh	Vishakapatnam	16-Apr-19
47	AIC IISER PUNE SEED FOUNDATION	AI, Data analytics, Biotech, Healthcare, Energy and Material science	Maharashtra	Pune	04-Feb-20
48	AIC SELCO Foundation	Cleantech	Assam	Guwahati	06-Feb-20
49	AIC IIT DELHI SONIPAT INNOVATION FOUNDATION	Biotechnology, ICT, Manufacturing & Engineering	Haryana	Sonepat	13-Feb-20
50	AIC - Nalanda Institute of Technology Foundation	Education, Manufacturing and Engineering, Other emerging areas or of social / national importance	Orissa	Bhubaneshwar	04-Mar-20
51	AIC- DSU Innovation Foundation	Health and Pharmaceuticals Transport Water, Sanitation and Solid Waste Management	Karnataka	Bangalore	13-Feb-20
52	AIC - BAMU Foundation		Maharashtra	Aurangabad	19-Nov-19
53	AIC - GUSEC Foundation	Other emerging areas or of social / national importance Water, Sanitation and Solid Waste Management	Gujarat	Ahmedabad	13-Mar-20

54	AIC SRS-ICAR-NDRI Foundation	Agri & Allied, Education	Karnataka	Bangalore	13-Feb-20
55	AIC - C.V. Raman College of Engineering Foundation	Software Development, Aerospace & Structural Designing, Industrial Automation, Instrumentation, Food Processing, Solid Waste Management	Orissa	Khordha	04-Mar-20
56	T Hub foundations	Urban Smart Transportation, Electric & Mechanic Tech, Battery related technology	Telangana	Hyderabad	27-Mar-20
57	CODISSIA Defence Innovation and Atal Incubation Centre	Manufacturing and Engineering, Mapping & Analysing Capabilities of MSME, Infrastructure	Tamil Nadu	Coimbatore	13-Feb-20
58	AIC - NITTE Incubation Centre	Sector Agnostic	Karnataka	Mangalore	10-Feb-20
59	AIC B V FOUNDATION	Agriculture and Allied Fields Bio Technology Education	Bihar	Patna	04-Mar-20
60	AIC - AMBEDKAR UNIVERSITY DELHI FOUNDATION	Social Entrepreneurship	Delhi	Delhi	04-Mar-20
61	AIC-AU INCUBATION FOUNDATION	Agri & Allied, Energy, Transportation, Smart materials, unmanned aerial vehicle systems, Healthcare, Instrumentation, Big data, IoT	Tamil nadu	Chennai	13-Feb-20
62	AIC-JAWAHARLAL NEHRU UNIVERSITY FOUNDATION FOR INNOVATION	Deep Technologies - Biotechnology, Health and Pharma	Delhi	Delhi	09-Mar-20
63	AIC STPINEXT INITIATIVES	Health and Pharmaceuticals, ICT, Other emerging areas or of social / national importance	Delhi	Delhi	17-Mar-20
64	AIC- Jammu and Kashmir EDI	Agri-allied, Production Desing, Horticulture, Handicraft, Media cells, Event management, Waste water management, Education, Other areas of social	Jammu & Kashmir	Pulwama	27-Mar-20

		importance			
65	Foundation for Innovation and Social Entrepreneurship	Clean Energy	Delhi	Delhi	01-May-20
66	Atal Incubation Centre Catalyst	FinTech	Rajasthan	Jaipur	01-May-20
67	AIC - Shiksha Infotech Foundation	Healthcare, Education, Student safety, e-Commerce, IoT	Karnataka	Bangalore	23-Apr-20
68	AIC SURATI ILAB FOUNDATION	Smart transport & Mobiity solution, Water sector & drainage, smart governance, infrastructure, green energy, economic development	Gujarat	Surat	23-Apr-20

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