

GOVERNMENT OF INDIA  
MINISTRY OF SCIENCE AND TECHNOLOGY  
DEPARTMENT OF SCIENCE AND TECHNOLOGY  
**RAJYA SABHA**  
**UNSTARRED QUESTION No. 2208**  
ANSWERED ON 04.08.2022

**FACILITIES FOR RESEARCH AND DEVELOPMENT**

2208. SHRI S. SELVAGANABATHY:

Will the Minister of Science and Technology be pleased to state:

- (a) the details of the funds allocated for Research and Development and utilised in the last five years, institution-wise;
- (b) the number of innovations recorded during the last five years, year-wise and field-wise; and
- (c) whether the research institutions in the country are unable to provide adequate facilities and competent faculty to train young brains to undertake innovations in the fields of science and technology?

**ANSWER**

MINISTER OF STATE (INDEPENDENT CHARGE) OF THE  
MINISTRY OF SCIENCE AND TECHNOLOGY AND EARTH SCIENCES  
(DR. JITENDRA SINGH)

- (a) The funds allocated for Research and Development and utilized by Research and Development Institutions under Ministry of Science and Technology, during the last five years, year-wise and institution-wise are annexed as Annexure-I.
- (b) The patents filed in the Office of the Controller General of Patents, Designs & Trade marks (CGPDTM) also indicate the innovations recorded by scientists through Research and Development. Accordingly, patents filed and granted during the last five years, year-wise and field-wise are annexed as Annexure-II and Annexure-III respectively.
- (c) No, Sir. Research and Development Institutions under Ministry of Science and Technology are supported adequately by the Government for pursuing R&D activities, building and maintaining the desired R&D infrastructure and national R&D human resource development. In turn, these Institutions provide adequate research facilities and ample opportunities to its young scientists to carry out their scientific innovative work.

**ANNEXURE-I**

ANNEXURE REFERRED TO IN REPLY TO PART (a) OF RAJYA SABHA UNSTARRED QUESTION No. 2208 FOR REPLY ON 04.08.2022

| (Amount in Cr.)                                       |                                                                                                  |                                                                   |         |         |         |         |
|-------------------------------------------------------|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|---------|---------|---------|---------|
| S. No.                                                | Name of the Institute/Laboratory/Organization                                                    | Allocation/Expenditure in respect of R&D Institution/Laboratories |         |         |         |         |
|                                                       |                                                                                                  | 2017-18                                                           | 2018-19 | 2019-20 | 2020-21 | 2021-22 |
| Part 'A' : Department of Science and Technology (DST) |                                                                                                  |                                                                   |         |         |         |         |
| 1.                                                    | Agharkar Research Institute (ARI), Pune                                                          | 21.00                                                             | 19.74   | 21.09   | 29.50   | 34.47   |
| 2.                                                    | Aryabhatta Research Institute of Observational Sciences (ARIES), Nainital                        | 14.73                                                             | 20.80   | 24.31   | 36.35   | 38.90   |
| 3.                                                    | Bose Institute (BI), Kolkata                                                                     | 83.54                                                             | 99.79   | 117.48  | 97.42   | 97.81   |
| 4.                                                    | BirbalSahni Institute of Palaeosciences (BSIP), Lucknow                                          | 33.99                                                             | 41.29   | 46.04   | 53.09   | 57.25   |
| 5.                                                    | Centre for Nano and Soft Matter Sciences (CeNS), Bengaluru                                       | 10.24                                                             | 10.55   | 13.58   | 13.74   | 17.55   |
| 6.                                                    | Indian Association for the Cultivation of Science (IACS), Kolkata                                | 100.25                                                            | 118.37  | 116.85  | 127.63  | 126.32  |
| 7.                                                    | Indian Institute of Astrophysics (IIA), Bengaluru                                                | 57.97                                                             | 69.75   | 69.19   | 109.35  | 120.11  |
| 8.                                                    | Indian Institute of Geomagnetism (IIG), Navi Mumbai                                              | 37.70                                                             | 44.04   | 49.34   | 46.21   | 56.72   |
| 9.                                                    | Institute of Advanced Study in Science and Technology (IASST), Guwahati                          | 28.86                                                             | 32.90   | 35.85   | 30.80   | 34.65   |
| 10.                                                   | Institute of Nano Science and Technology (INST), Mohali                                          | 66.26                                                             | 67.19   | 107.09  | 61.89   | 57.96   |
| 11.                                                   | International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI), Hyderabad | 53.27                                                             | 53.21   | 52.01   | 61.16   | 73.94   |
| 12.                                                   | Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bengaluru                     | 76.42                                                             | 84.84   | 109.28  | 102.67  | 120.20  |
| 13.                                                   | Raman Research Institute (RRI), Bengaluru                                                        | 46.86                                                             | 48.82   | 51.88   | 61.28   | 62.80   |

|                                              |                                                                                               |        |        |         |         |         |
|----------------------------------------------|-----------------------------------------------------------------------------------------------|--------|--------|---------|---------|---------|
| 14.                                          | SatyendraNath Bose National Centre for Basic Sciences (SNBNCBS), Kolkata                      | 39.71  | 34.91  | 34.39   | 44.69   | 47.08   |
| 15.                                          | Wadia Institute of Himalayan Geology (WIHG), Dehradun                                         | 31.02  | 23.91  | 37.10   | 40.89   | 60.99   |
| 16.                                          | SreeChitraTirunal Institute for Medical Sciences and Technology (SCTIMST), Thiruvananthapuram | 205.03 | 196.75 | 186.15  | 310.10  | 335.01  |
| Sub-Total (DST)                              |                                                                                               | 906.85 | 966.86 | 1071.63 | 1226.77 | 1341.76 |
| Part 'B' : Department of Biotechnology (DBT) |                                                                                               |        |        |         |         |         |
| 17.                                          | National Institute for Plant Genome Research, New Delhi                                       | 71.75  | 73.50  | 82.44   | 71.55   | 59.25   |
| 18.                                          | Institute of Life Sciences, Bhubaneswar                                                       | 54.40  | 61.50  | 63.00   | 47.10   | 52.15   |
| 19.                                          | Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram                                     | 40.20  | 43.00  | 49.00   | 43.50   | 120.30  |
| 20.                                          | National Institute of Biomedical Genomics, Kalyani                                            | 42.21  | 45.00  | 29.13   | 27.45   | 30.75   |
| 21.                                          | International Centre for Genetic Engineering and Biotechnology, New Delhi.                    | 38.00  | 38.00  | 48.24   | 31.50   | 33.50   |
| 22.                                          | National Institute of Immunology, New Delhi                                                   | 25.00  | 27.44  | 27.68   | 12.76   | 76.89   |
| 23.                                          | National Centre for Cell Science, Pune                                                        | 58.58  | 53.63  | 58.02   | 39.50   | 48.25   |
| 24.                                          | Centre for DNA Finger Printing & Diagnostics, Hyderabad                                       | 29.48  | 41.94  | 54.50   | 35.50   | 46.06   |
| 25.                                          | National Brain Research Centre, Gurgaon                                                       | 75.12  | 85.24  | 97.72   | 91.42   | 29.25   |
| 26.                                          | Institute of Bioresources & Sustainable Development, Imphal                                   | 25.50  | 26.58  | 30.00   | 19.75   | 19.61   |
| 27.                                          | Translational Health Science & Technology Faridabad                                           | 25.65  | 33.92  | 41.20   | 33.00   | 42.85   |
| 28.                                          | Regional Centre for Biotechnology, Faridabad                                                  | 31.00  | 31.48  | 30.15   | 15.75   | 42.00   |
| 29.                                          | National Agri-Food Biotechnology Institute, Mohali                                            | 82.50  | 82.07  | 67.20   | 38.72   | 19.18   |
| 30.                                          | Institute for Stem Cell Research and Regenerative Medicine, Bengaluru                         | 75.50  | 53.50  | 28.08   | 23.00   | 39.64   |

|                                                               |                                                        |         |         |         |         |         |
|---------------------------------------------------------------|--------------------------------------------------------|---------|---------|---------|---------|---------|
|                                                               |                                                        |         |         |         |         |         |
| 31.                                                           | National Institute of Animal Biotechnology, Hyderabad  | 14.46   | 12.52   | 13.17   | 12.00   | 28.80   |
| 32.                                                           | Centre of Innovative and Applied Bioprocessing, Mohali | 35.16   | 38.60   | 42.00   | 33.50   | 8.70    |
| Sub-Total (DBT)                                               |                                                        | 724.51  | 747.93  | 761.53  | 577.00  | 697.18  |
| Part 'C' : Council of Scientific & Industrial Research (CSIR) |                                                        |         |         |         |         |         |
| 33.                                                           | Council of Scientific & Industrial Research (CSIR)     | 4582.12 | 4521.28 | 4831.58 | 4101.22 | 5174.34 |
| Sub-Total (CSIR)                                              |                                                        | 4582.12 | 4521.28 | 4831.58 | 4101.22 | 5174.34 |
| Total                                                         |                                                        | 6213.48 | 6236.07 | 6664.74 | 5904.99 | 7213.28 |

**ANNEXURE-II**

ANNEXURE IN RESPECT OF PATENTS FILED REFERRED TO IN REPLY TO PART (b) OF  
RAJYA SABHA UNSTARRED QUESTION No. 2208 FOR REPLY ON 04.08.2022

| <b>Field of Invention/ Year</b> | <b>2016-17</b> | <b>2017-18</b> | <b>2018-19</b> | <b>2019-20</b> | <b>2020-21</b> |
|---------------------------------|----------------|----------------|----------------|----------------|----------------|
| Chemical                        | 5911           | 6343           | 6560           | 5198           | 8809           |
| Pharmaceuticals                 | 2122           | 2741           | 2683           | 5622           | 80             |
| Polymer Science & Technology    | 1158           | 1116           | 1100           | 1309           | 1508           |
| Computer Science& Electronics   | 6443           | 6089           | 5540           | 11126          | 11930          |
| Communication                   | 5315           | 5486           | 6308           | 6862           | 6660           |
| Electrical                      | 4141           | 4278           | 4703           | 4587           | 3743           |
| Physics                         | 2693           | 2996           | 3659           | 2646           | 2842           |
| Bio- Medical                    | 1048           | 1095           | 812            | 3508           | 4911           |
| Mechanical Engineering          | 10715          | 11573          | 12414          | 10359          | 10540          |
| Bio- technology                 | 876            | 992            | 882            | 1065           | 3368           |
| Bio- Chemistry                  | 258            | 331            | 282            | 442            | 820            |
| Food                            | 283            | 344            | 430            | 1111           | 617            |
| Micro- Biology                  | 253            | 297            | 301            | 17             | 0              |
| Metallurgy & Material Science   | 777            | 713            | 734            | 836            | 870            |
| Textile                         | 837            | 795            | 881            | 693            | 900            |
| Civil                           | 741            | 779            | 956            | 816            | 827            |
| General Engineering             | 1225           | 1032           | 1537           | 27             | 31             |
| Agro- chemicals                 | 319            | 429            | 392            | 19             | 3              |
| Agriculture Engineering         | 245            | 338            | 411            | 13             | 11             |
| Traditional Knowledge           | 84             | 87             | 74             | 11             | 6              |
| <b>Total</b>                    | <b>45444</b>   | <b>47854</b>   | <b>50659</b>   | <b>56267</b>   | <b>58476</b>   |

**ANNEXURE-III**

ANNEXURE IN RESPECT OF PATENTS GRANTED REFERRED TO IN REPLY TO PART (b) OF  
RAJYA SABHA UNSTARRED QUESTION No. 2208 FOR REPLY ON 04.08.2022

| <b>Field of Invention/ Year</b>  | <b>2016-17</b> | <b>2017-18</b> | <b>2018-19</b> | <b>2019-20</b> | <b>2020-21</b> |
|----------------------------------|----------------|----------------|----------------|----------------|----------------|
| Chemical                         | 2673           | 3376           | 4242           | 4848           | 6074           |
| Pharmaceuticals                  | 551            | 733            | 761            | 1930           | 1264           |
| Polymer Science&<br>Technology   | 562            | 747            | 701            | 923            | 1745           |
| Computer Science&<br>Electronics | 1049           | 1028           | 1074           | 2141           | 2049           |
| Communication                    | 805            | 1031           | 1414           | 2692           | 2857           |
| Electrical                       | 579            | 818            | 1253           | 2451           | 2637           |
| Physics                          | 260            | 568            | 703            | 1349           | 1396           |
| Bio- Medical                     | 167            | 150            | 290            | 565            | 703            |
| Mechanical Engineering           | 1939           | 2514           | 2857           | 5301           | 6348           |
| Bio- technology                  | 333            | 546            | 457            | 357            | 574            |
| Bio- Chemistry                   | 73             | 142            | 161            | 188            | 236            |
| Food                             | 71             | 106            | 76             | 114            | 169            |
| Micro- Biology                   | 81             | 108            | 104            | 152            | 151            |
| Metallurgy& Material<br>Science  | 182            | 429            | 272            | 363            | 634            |
| Textiles                         | 93             | 179            | 212            | 493            | 443            |
| Civil                            | 100            | 124            | 155            | 280            | 412            |
| General Engineering              | 228            | 297            | 303            | 446            | 378            |
| Agro- chemicals                  | 97             | 125            | 215            | 289            | 236            |
| Agriculture Engineering          | 4              | 24             | 33             | 54             | 79             |
| <b>Total</b>                     | <b>9847</b>    | <b>13045</b>   | <b>15283</b>   | <b>24936</b>   | <b>28385</b>   |

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