**PAKISTAN COUNCIL FOR SCIENCE AND TECHNOLOGY**

**ISLAMABAD**

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**National S&T Statistics Survey, 2022: Data for UNESCO**

**A. General Particulars**

1. Name of the University/Organization: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. (i) Name and Designation of Head of the University/Organization: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(ii) Telephone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (iii) Fax: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(iv) E-mail: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (v) Website: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. (i) Name & Designation of the Person supplying the information: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(ii) Telephone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (iii) Fax: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (iv) e-mail: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What percentage of your university’s/organization’s activities can be categorized under the following? (Please give an estimate based on your knowledge / experience for **only those activities** which your university/organization undertakes)

(%)

1. Teaching / education (degree programmes)
2. Professional training (non-degree programmes)
3. Research and Development (R&D)
4. S&T policy
5. R&D funding activities
6. S&T / R&D regulatory activities
7. Quality control and testing services
8. S&T / R&D information services
9. Other (please specify)

**100%**

**Total**

**Definition:***Research and Experimental Development (R&D)* comprise creative and systematic work undertaken in order to increase the stock of knowledge – including knowledge of humankind, culture and society – and to devise new applications of available knowledge.

**B.1. Source of Funds and Expenditure**

(Please read notes below for source of funds)

**2020-21 (Million Rupees)**

|  |  |  |
| --- | --- | --- |
| **Source of funds/income** | **Amount of funds/income received** | **Expenditure incurred** |
| 1. Development funds received from government |  |  |
| 1. Non-development / recurring funds received from government |  |  |
| 1. Donation/ grants received from government |  |  |
| 1. Donation/ grants received from private sector |  |  |
| 1. Income generated from endowment funds |  |  |
| 1. Tuition fee/bench fee etc. (if any) |  |  |
| 1. Funds generated through IP rights (licence fee, royalty etc.) |  |  |
| 1. International research grants/funds received from abroad |  |  |
| 1. Others (specify) |  |  |
| **Total** |  |  |

\*Please give break-up of total expenditure in the Section B.2. below.

**Notes for B.1. Source of Funds**

* **Government**
* **Development**

Funds obtained from the government for development / research projects etc. These funds are normally obtained through PC-1s or funds obtained from local funding agency like PSF, PARB, HEC and others.

* **Non-Development / Recurring**

Funds provided by the government to organizations / departments in demand to their routine annual budgetary requirements. It is also called recurring budget.

* **International Research Grants**

All sorts of international research grants or funds from abroad.

Grants from all institutions and individuals located outside the geographical borders of a country.

* **Income from endowment fund**

It is the income obtained from (investment of) the endowment fund during the year and not the actual / original amount of the endowment fund.

**B.2. Break-up of Total Expenditure**

(Please read notes / explanation below for break-up of expenditure)

**(Million Rupees)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Year** | **Staff salary** | **Infrastructure^** | **R&D expenditures^^** | **Others**  (please specify)**^^^** | **Total** |
| **2020-21** |  |  |  |  |  |

**^** Office building, vehicles, equipment, books, journals etc.

^^ R&D equipment / apparatus, maintenance of R&D equipment, R&D consumables etc.

^^^ Others: all other expenditures including utilities, maintenance etc.

##### C. Number of R&D Personnel by Field of Activity, Qualification Level and Gender (as on June 30, 2021)

(Please read notes on page-4 for definitions and classifications)

**C.1. Faculty Members/Researchers (Full time employees only as on June 30, 2021)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Field of Science | **Ph.D.** | | **M. Phil/**  **Equivalent¥** | | **Masters/ Equivalent£** | | **Bachelors/**  **Equivalent#** | | **Others\*** | | **Total** | |
| **Male** | **Female** | **Male** | **Female** | **Male** | **Female** | **Male** | **Female** | **Male** | Female | **Male** | **Female** |
| **Natural Sciences** |  |  |  |  |  |  |  |  |  |  |  |  |
| **Engineering and Technology** |  |  |  |  |  |  |  |  |  |  |  |  |
| **Medical and Health Sciences** |  |  |  |  |  |  |  |  |  |  |  |  |
| **Agricultural and Veterinary Sciences** |  |  |  |  |  |  |  |  |  |  |  |  |
| **Social Sciences** |  |  |  |  |  |  |  |  |  |  |  |  |
| **Humanities and Arts** |  |  |  |  |  |  |  |  |  |  |  |  |
| **Other Fields** |  |  |  |  |  |  |  |  |  |  |  |  |
| **Total** |  |  |  |  |  |  |  |  |  |  |  |  |

¥ 6 years of education after Intermediate/Equivalent £4-5 years of education after Intermediate/Equivalent

#2-3 years of education after Intermediate/Equivalent \*F.A/F.Sc/Diploma/Certificate and below

# C.2.M.Phil andPh.D Scholars enrolled (as on June 30, 2021)

# (The scholars, who are employed in a university or an R&D organization, should not be included.)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Field of Science and Technology | **M.Phil** | | | **Ph.D** | | |
| **Male** | **Female** | **Total** | **Male** | **Female** | **Total** |
| **Natural Sciences** |  |  |  |  |  |  |
| **Engineering and Technology** |  |  |  |  |  |  |
| **Medical and Health Sciences** |  |  |  |  |  |  |
| **Agricultural and Veterinary Sciences** |  |  |  |  |  |  |
| **Social Sciences** |  |  |  |  |  |  |
| **Humanities and Arts** |  |  |  |  |  |  |
| **Other Fields** |  |  |  |  |  |  |
| **Total** |  |  |  |  |  |  |

**C.3. Technicians and Equivalent Staff (as on June 30, 2021)**

|  |  |  |
| --- | --- | --- |
| **Male** | **Female** | **Total** |
|  |  |  |

**C.4. Supporting Staff(as on June 30, 2021)**

|  |  |  |
| --- | --- | --- |
| **Male** | **Female** | **Total** |
|  |  |  |

**………………………………………………………………..……………………………**

**(Name and Signature of the person with Official Stamp providing the information)**

**Notes for C. for definitions and classification of R&D Personnel and Fields of Science and Technology**

**(a) R&D personnel (Adapted from OECD classification)**

* **Researchers**

Professionals engaged in the conception or creation of new knowledge, products, processes, methods and systems and also in the management of projects concerned. Heads of the R&D organizations should be considered as researchers. Postgraduate students at the PhD level engaged in R&D should be considered as researchers.

* **Technicians and Equivalents Staff**

Persons whose main tasks require technical knowledge experience in one or more fieldsof engineering, physical and life sciences (technicians) or social sciences and humanities (equivalent staff). They participate in R&D by performing scientific and technical tasks involving the application of concepts and operational methods, normally under the supervision of researchers.

* **Supporting Staff**

Include skilled and unskilled craftsmen, secretarial and clerical staff participating in R&D projects or directly associated with (or providing services to researchers involved in) such projects. All administration, account and library staff etc., of R&D organizations should be considered as supporting staff.

**(b) Fields of Science and Technology (UNESCO Classification)**

* **Natural Sciences**
  + **Mathematics and computer science:** mathematics and allied fields; computer sciences and other allied subject (software development only; hardware development should be classified in the engineering fields)
  + **Physical sciences:** astronomy and space sciences, physics and allied subjects
  + **Chemical sciences:** chemistry, other allied subjects
  + **Earth and related environmental sciences:** geology, geophysics, mineralogy, physical geography and other geosciences, meteorology and other atmospheric sciences including climatic research, oceanography, vulcanology, palaeoecology, other allied sciences
  + **Biological sciences:** biology, botany, bacteriology, microbiology, zoology, entomology, genetics, biochemistry, biophysics, other allied sciences, excluding clinical and veterinary sciences
  + **Engineering and Technology**
* **Civil Engineering:** architecture engineering, building sciences and engineering, construction engineering, municipal and structural engineering and other allied subjects
* **Electrical Engineering:** electrical engineering, electronics, communication engineering and systems, computer engineering (hardware and other allied subjects)
* **Other engineering sciences:** such as chemical, aeronautical and space, mechanical, metallurgical and materials engineering, and their specialized subdivisions; forest product; applied sciences such as geodesy, industrial chemistry, etc.; the science and technology of food production; specialized technologies of interdisciplinary fields, e.g. system analysis, metallurgy, mining, textile technology and other allied subjects
  + **Medical and Health Sciences**
* **Basic medicine:** anatomy, cytology, physiology, genetics, pharmacy, pharmacology, toxicology, immunology and Immunohaematology, clinical chemistry, clinical microbiology, pathology
* **Clinical medicine:** anesthesiology, pediatrics, obstetrics and gynecology, internal medicine, surgery, dentistry, neurology, psychiatry, radiology, therapeutics, otorhinolaryngology, ophthalmology
* **Health sciences:** public health services, social medicine, hygiene, nursing, epidemiology
  + **Agricultural and Veterinary Sciences**
* **Agriculture, forestry, fisheries and allied sciences**: agronomy, animal husbandry, fisheries, horticulture, other allied subjects
* **Veterinary medicine**
  + **Social Sciences**
* **Management / Accountancy / Commerce / Business Administration**
* **Psychology**
* **Economics**
* **Educational sciences:** education and training and other allied subjects
* **Other allied subjects:** anthropology (social and cultural) and ethnology, demography, geography (human, economics and social), town and country planning, management, law, linguistics, political sciences, sociology, organization and methods, miscellaneous social sciences and interdisciplinary, methodological and historical S&T activities relating to subjects in this group. “Physical anthropology, physical geography and psychophysiology should normally be classified with the natural sciences
  + **Humanities and arts**
* **History:** history, prehistory, together with auxiliary historical disciplines such as archaeology, numismatics, paleography, genealogy, etc.
* **Language and literature:** ancient and modern
* **Other humanities:** philosophy (including the history of science and technology), arts, history of arts, art criticism, painting, sculpture, musicology, dramatics art excluding artistic “**research**” of any kind, religion, theology, other fields and subject pertaining to the humanities, methodological, historical and other S&T activities relating to the subjects in this group.