



## EQUIPMENT AND FACILITIES

of Jawaharlal Nehru University  
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SNo	Title *purchased with the SUNRAISE financial support	Description	Photo
1.	<b>Computing facility - Workstations</b>	A laboratory with computing facility is developed for the satellite data processing and geospatial analysis. The laboratory has access to all kind of spatial datasets via web-link.	
2.	<b>Handheld GPS</b>	Multiple units of handheld GPS are maintained for the frequent field work wherein geo-tagging is required.	

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3.	<b>Military Compass as per MHA</b>	Modern geological compass Rectangular $\pm 1/2^\circ$ Slop Indicator (3 different scales of angular measurement above and below horizontal: Left: Slope in Degrees, 0-90° Middle) Up to 10x magnification with an adjustable lens.	
4.	<b>Brunton Clinometer Compass</b>	Clinometer with $2^\circ$ resolution for measuring slope angle or gauging heights of passes, peaks or trees Sighting mirror and sighting line integrated with $1^\circ$ resolution azimuth ring precise readings	

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5.	<b>Fisheye Lens (8-15mm F/42)</b>	A DSLR (digital single-lens reflex camera) mountable fish eye lens are available for forest inventory related activities. It is now being also used for the urban fabric composition.	
6.	<b>Willey Mills (3SS Sieves)</b>	The Willey mills sieve is available with hard tool steel knives bolted to a removable rotor for preparation of samples for soil and plant (leaves and wood) analysis.	

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7.	<b>Digester Kjeldahl</b>	Multiple digester is available for the Kjeldahl – it breaks down the bonds that hold the polypeptides together.	
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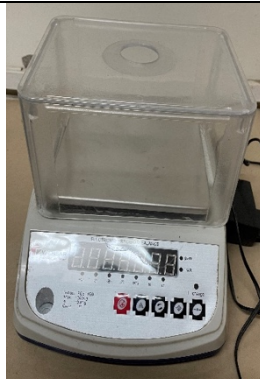


<p>8.</p>	<p><b>Kjeldahl Analytical set-up</b></p>	<p>A complete set-up of Kjeldahl method, is available which is widely used for estimating the nitrogen content of foodstuffs, fertilizers, and other substances, including soil and plant parts.</p>	
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9.	<b>ORLAB Pusa Kit for Soil Test and Fertilizer</b>	Portable Digital operated with battery/electricity. Multi-Parameter Soil Field Test Kit (pH; Conductivity; OC; N; P and K) and (Zn; S; B; Fe; Mn; Cu; Lime (acidic soils); Gypsum Portable Mini Shaker Programmed STFR Meter and Thermal Printer	
10.	<b>Electronic weighing machine</b>	The weighing scale/machine is widely used for the preparation of solutions for chemical analysis and related experiment.	

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11.	<p><b>Hot Air Oven</b></p>	<p>Hot air oven is used to sterilize the equipment and other materials that are used in a laboratory. These also being used to use dry heat to sterilize for the soil and plant part analysis.</p>	
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<p>12.</p>	<p><b>Titration - analytical set-up</b></p>	<p>Multiple units of Titration analytical set-up with pre-requisite chemicals is available for wide range of experimentation wherein the quantity of a reactant in a sample is to be determined.</p>	
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<p>14.</p>	<p><b>Distilled Water Plant</b></p>	<p>Semi-Automatic Water Distillation Unit with capacity of around 5 liters per hour is available working throughout the day and having storage capacity as per requirement.</p>	
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Co-funded by the Erasmus+ Programme of the European Union

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<p>15.</p>	<p><b>Soxhlet extraction unit</b></p>	<p>Soxhlet extraction is used for extracting valuable bioactive compounds (nonvolatile and semivolatile organic compounds from solids such as soils, sludges, and wastes) from various natural sources.</p>	
<p>16.</p>	<p><b>Color LCD Thermal imager 100000 Pixel</b></p>	<p>Infrared spectral band from 7.5 <math>\mu\text{m}</math> to 14 <math>\mu\text{m}</math> (long wave), Resolution 384 x 288 (110,592 pixels), IFOV with standard lens/spatial resolution 1.91 mRad, Field of View 42° x 30 °        Temperature ranges from -20 °C to 550 °C with accuracy of <math>\pm 2</math> °C or 2 %, Image format (bmp and/or jpeg with provision to export file formats GIF, PNG, TIFF)</p>	



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17.	<p><b>Color LCD Touch Display Thermal imager 300000 Pixel</b></p>	<p>Infrared spectral band from 7.5 <math>\mu\text{m}</math> to 14 <math>\mu\text{m}</math> (long wave), Resolution 640 x 480 (307,200 pixels), IFOV with standard lens/spatial resolution 0.93 mRad, Field of View 34 °H x 24 °V Temperature ranges up to 500°C beyond with accuracy of <math>\pm 2</math> °C or 2 %, Image format (bmp and/or jpeg with provision to export file formats GIF, PNG, TIFF)</p>	
18.	<p><b>Laser Rangefinder/Hypsometer</b></p>	<p>Magnification 6x, Linear Field of View 341 feet @ 1000 yds, Angular Field of View 6.5 degrees, Eye Relief 15 mm, Operating <math>\pm 90^\circ</math> Incline / Decline Range</p>	



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19.	<p><b>Dual laser Class II Handheld Digital Infrared Thermometer</b></p>	<p>Large, easy-to-read backlit LCD display for easy viewing; 8:1 Distance to Spot ratio, 59 MAX; Operating Altitude : 2000 m Above mean sea level; Drop Test : 1 m; Protection Class : IP 40; Laser Safety : FDA and EN 60825-1 Class II; Electromagnetic Compatibility</p>	
<p><b>Terms of use:</b> Under the cooperation agreements all equipment and facilities for study and research are provided at no charge; payment for consumables is a subject to additional agreement on a case-by-case basis. Contact information: P K Joshi (Email: <a href="mailto:pkjoshi27@hotmail.com">pkjoshi27@hotmail.com</a>)</p>			



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### Advanced Instrumentation Research Facility (AIRF) – Jawaharlal Nehru University (JNU)

AIRF/JNU is a specialized research facility which houses about sophisticated state-of-the-art instruments with various supporting/ basic facilities. It caters to the interdisciplinary applications in research to all the JNU Science Schools as well as other academic research institutes and private companies/ industries within and outside Delhi.

This research facility serves as an academic, research and scientific service provider and facilitator. It also supports inter-disciplinary academic and research activities by conducting through regular workshops and trainings programmes.

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