	CSIR-North East Institute of Science and Technology, Jorhat Procurement Plan For the FY 2024-25 & 2025-26			
Sl. No.	**Name of the Major Equipment**	**Quantity**	**Brief Specification and use**	**Estimated Cost (Lakh)**
1	Atomic force microscope (AFM) instrument with all accessories	1	High-resolution Advanced Atomic Force Microscope imaging system comprising of an Atomic Force Microscope (AFM), Nanolithography, Nanomanipulation, and Multiple Mode Imaging. An AFM instrument can capture surface topographic images of materials and map several other important material characteristics.	300.00
2	Laser Raman spectrometer with Raman imaging analysis	1	Spectrometer with three or more laser sources, real time data processing functions, applicable for both the solid and liquid samples, with added features of Raman imaging. Laser Raman spectroscopy with imaging capabilities to investigate the structural composition and chemical properties of different materials such as polymers, nanomaterials, carbon nanomaterials, membranes etc.	200.00

3	Thermochemical Analysis Platform with Pyro-probe and GC-MS		Brief Specification: Pyro-probe analyser and thermogravimetric analysis coupled with and GC-MS, Gas cylinders (N2, He, CO2, H2, Methane) Use: Pyro-probe and thermogravimetric analysis with GC-MS is extremely important to understand the complex mechanism of thermochemical reactions and wide range of product distribution and their kinetics. Pyro-probe-GC-MS is a reliable and robust technique that can be used to generate high-quality data. It is a valuable asset for any laboratory that needs to analyse complex samples or study catalytic reactions.	180.00
4	Preparative-HPLC with PDA and Mass Detector	1	01 preparative HPLC with PDA and Mass detector will be engaged in developing analytical reference standards from different sources, and our faculties are working on natural resources-based product development like bioactivity-guided fraction collection, purification of active markers at a high purity level. To meet our department's requirements, it is essential to have an LC-MS-based preparative system that can purify UV active and UV inactive compounds also.	160.00

5	Audio Visual Equipment for Dr J N Auditorium	1	Video Wall, Signage, Video switcher, Digital Podium, Audio Mixture, Conferencing Camera, Mic, Dolby Sound System, etc. for replacing 15 years old outdated audio visual equipment.	150.00
6	L2 Featured Managed Network Switch and Restructuring of Institutional LAN	1	48 ports, 24 ports, 16 ports, 8 ports L2 managed switch for replacement of outdated and unmanaged switch along with restructuring of entire Local Area Network.	130.00
7	FTIR with full range facility (Far IR, Mid IR & Near IR	1	FTIR spectrometer having both MID and FAR IR range analysis facility. FTIR spectrometer is basically used for functional group detection. R&D on Metal complex detection and biological applications	130.00
8	Cryogen Free Benchtop NMR	1	This Benchtop NMR is very essential and preliminary study for characterization of different chemical compounds before the sample to be recorded in the high resolution NMR. Can perform complex molecular analysis and can process control directly on the bench.	120.00
9	Cryogen Free Benchtop NMR	1	This Benchtop NMR is very essential and preliminary study for characterization of different chemical compounds before the sample to be recorded in the high-resolution NMR. Can perform complex molecular analysis and can process control directly on the bench.	120.00

10	High-Performance Research-Grade Dual Channel Electrochemical Workstation	1	Multi-channel electrochemical workstation (potentiostat / galvanostat) in 4 or 8 channels with 1 main channel with Electrochemical Impedance Spectroscopy (EIS). It is a versatile instrument offering 8 slots. The full floating module and electrical isolation design guarantee each channel to be totally independent, which ensures accurate data and efficient simultaneous measurements. This unit is suitable for those who have many samples. It is a comprehensive research platform for corrosion, batteries, electrochemical analysis, sensor, life science and environmental chemistry etc.	110.00
11	Analytical HPLC system with ELSD and Mass detector	1	Separation and detection of chemical compounds (with fluorophore/without fluorophore)	100.00
12	Fume Hoods for laboratory	10	10 Numbers of Chemical resistant Fume Hoods are required for all the labs of AOCG as the currents hoods are very old and inefficient resulting in the leakage of toxic fumes.	100.00

13	Thermochemical Reactor Rig		Brief Specification: Two set of reactors with different MOC for different temperature and pressure range (up to 850 0C and up to 100 Bar), MFC for three gases, temperature, one high pressure pump for liquid feed, pre-heater for gas and liquid, chiller, gas-liquid separator Uses: For variety of the project related to sustainable renewable sources to chemicals and fuels, glycerol, methane and CO2 conversion reactions are few examples that can be perform with these facilities. These facilities further can enhance the collaborative aspect of N-E region institute and industries	90.00
14	FT-IR Spectrometer	1	FTIR spectrometer having both MID and FAR IR range analysis facility. FTIR spectrometer is basically used for functional group detection.	75.00
15	Multi-Nuclear Broad Band observe Probe for 500 MHz NMR Spectrometer	1	Characterization of different chemical compounds	75.00
16	Multi-Nuclear Broad Band observe Probe for 500 MHz NMR Spectrometer	1	Characterization of different chemical compounds	75.00
17	Online GC with FID and TCD	1	Gas Chromatograph with Flame Ionisation Detector and Thermal Conductivity Detector with online connection to reactors. The GC will be connected to reactors involving H2 evolution, CO2 reduction and N2 reduction reaction.	75.00
18	Surface Tension and Contact angle measurement unit	1	Wettability Property of the Surfaces	75.00

19	Oxygen/Water Vapor Transmission Rate Test System	1	To measure the total gas Barrier properties of polymer films	75.00
20	CHNSO Analyser	1	CHNSO analyser is used for estimation of carbon, hydrogen, nitrogen, sulphur and oxygen.	70.00
21	CHNSO Analyser	1	CHNSO analyser is used for estimation of carbon, hydrogen, nitrogen, sulphur and oxygen.	70.00
22	Automatic Opto-Digital Microscope		The Automatic Opto-Digital Microscope is basically used for Material Science and Engineering Application. It can be used for 2D, 3D imaging and Measurement, Roughness Testing and Basic Image Analysis. More precisely, its applications are: Semiconductor / Electronics material development (cross section of capacitor, wafer application, PCB application etc); Metal applications; Material and Chemical applications including coating, platting, embossing, polymer, moulding, layering etc.; Other applications like printed surface, Glossy paper, Beetle, Beads, Leaf and Biology application, Solar cell, Beads, Beelet etc.	70.00

23	Gas Chromatography		We need an advanced version of gas chromatography equipped with FID with methanizer and TCD to analyze a wide range of aliphatic and aromatic hydrocarbon compounds for daily analysis of samples related to project research. We need to perform qualitative and quantitative analyses using gas chromatography to validate experimental results. This equipment is required for most of the researchers in the institute.	70.00
24	Online GC with FID and TCD	1	Gas Chromatograph with Flame Ionisation Detector and Thermal Conductivity Detector with online connection to reactors. The GC will be connected to reactors involving H_2 evolution, CO_2 reduction and N_2 reduction reaction	60.00
25	Microwave Assisted Extraction System		To extract value added compounds from natural resources in NER.	55.00
26	Normal Phase analytical HPLC	1	PDA based HPLC is needed for purification of non-polar bioactive compounds. Currently there is no such facility in our lab.	50.00
27	Combi Flash	2	Combi Flash instrument are required for the separation and purification of organic molecules and natural products in daily basis. Unfortunately our current instrument is not working due to severe damage to essential parts such as mother board, D2 lamp, display, etc.	50.00
28	VoIP Telephone Network	1	Replace the existing old technology based telephone network with latest VoIP Technology.	50.00

29	CNC Machining Systems comprises of turning, milling and turno-milling (in multi axis)		To be used in all types of fabrication and technology scale up fabrications.	50.00
30	HPLC with Fractional Collector		For analysis/purification of chemical, biochemicals/metabolites during the microbial growth kinetic studies	50.00
31	Multi-channel potentiostat with accessories	1	Multi-channel electrochemical workstation (potentiostat / galvanostat) in 4 or 8 channels with 1 main channel with Electrochemical Impedance Spectroscopy (EIS). It is a versatile instrument offering 8 slots. The full floating module and electrical isolation design guarantee each channel to be totally independent, which ensures accurate data and efficient simultaneous measurements. This unit is suitable for those who have many samples. It is a comprehensive research platform for corrosion, batteries, electrochemical analysis, sensor, life science and environmental chemistry etc.	45.00
32	Hydrogen & Nitrogen Gas generator	1	1. Z.PROSPERO.1/1 110-220V/50-60 Hz 1,0 l/min of Nitrogen purity > 99.999%, CH4< 0,05 ppm, combined with 1,5 l/min of Pure Air, with integrated compressor. 2. COSMOS.MB.H2.170 170 cc/min of hydrogen, purity > 99.999%, pressure 0-7 bar, with static dryer, maintenance-free	45.00

33	Tensiometer	1	For routine analysis of samples to measure the surface tension Interfacial, tension (immiscible two liquids), Critical micelle conc. Liquid density (pycnometer) Lamella length measurement, solid density Sedimentation etc.	40.00
34	UV Diffuse reflectance spectroscopy:	1	Suitable to study characteristics of opaque solid samples, Liquid, solids and thin film samples	40.00
35	Shelf life Measurement System		To measure the shelf life of different food sample.	40.00
36	UV-Vis-NIR Spectrophotometer	1	UV-Vis-NIR spectrophotometers provide the widest photometric range available, across the broadest wavelength range—with absorbances exceeding 8 from the UV-Vis to the NIR. Superior photometric range and linearity in the UV-Vis. Avoid time consuming sample and standard dilutions, and confidently measure the most challenging of samples.	30.00
37	Fume Hoods for laboratory	3	03 Numbers of Chemical resistant Fume Hoods are required for all the labs of AOCG as the currents hoods are very old and inefficient resulting in the leakage of toxic fumes.	30.00
38	Rotary evaporator	2	02 Number of Rotary Evaporator as our group lack this instrument since beginning and this instrument is essential for running daily operations.	30.00

39	Rotary evaporator	3	02 Number of Rotary Evaporator as our group lack this instrument since beginning and this instrument is essential for running daily operations.	30.00
40	Total western blot workflow system	1	A complete Western workflow system with gel units, blotter, and detectors is required for high-resolution imaging and analysis of DNA, RNA, and Protein gels.	30.00
41	Fluorescent microscope	1	Should be EPI-fluorescent and transmitted bright-field microscopy system. High quality Achromatic objectives: 4X, 10X, 40X & 100X. High quality fluorescent Plan objectives: FLUOR 4X, 10X, 40X & 100X. 100W fluorescent light source 100W HBO ultra hi-voltage spherical mercury lamp. Three-position fluorescent filter slider assembly for blue, green, and brightfield.	30.00
42	Electrochemical workstation (Potentiostat) with accessories	1	Electrochemical workstation (potentiostat) with minimum two channels, with a 500 mA or above current range, and built-in electrochemical impedance spectroscopy (EIS) and other high-end specifications. Applicable for electrochemical energy studies, such as electrocatalyst testing, energy storage device testing etc.	30.00
43	Dedicated GC for H_2 analysis	1	For quantification of H2 gas	30.00

44	HPLC with RI Detector	1	CSIR-NEIST has several HPLC with different detectors but we do not have HPLC with Refractive Index (RI) detectors. HPLC with RI Detector is required to accurately quantify triglycerides and fatty acid methyl esters (FAMEs), identify impurities, analyze feedstock composition, ensure product quality, optimize process parameters.	28.00
45	Steady State and Lifetime Benchtop Spectrofluorometer with 'Time Correlated Single Photon Counting' lifetime measurement.	1	Enhanced sensitivity and dynamic range enable fluorescence as well as bioluminescence, chemiluminescence, and electro-luminescence measurements. High-speed 3D scanning enables rapid acquisition of 3D spectra. Spectral-Corrected Excitation and Emission spectra can be scanned. Fluorescence quantum yield and Fluorescence quantum efficiency measurements are available.	25.00

46	Multimode microplate reader	1	Hybrid plate reader with monochromator and filter optics for detection Monochromator detection modes: UV-Vis Absorbance, Flourescence Intensity (variable bandwidth) Filter detection mode: UV-Vis Absorbance Fluorescence intensity, Luminescence Have shaking facility Should support 6 to 96 well plates Capacity: Absorbance, Absorbance spectra, Flourescence, fluorescence spectra, Time resolved spectra, Luminescence	25.00
47	Digital TOG /TPH Analyzer		A Total Oil/Grease and Petroleum Hydrocarbon (TOG/TPH) analyzer is pivotal for bioremediation studies, facilitating precise measurement of oil/grease content and hydrocarbon concentrations in contaminated samples, guiding the selection and optimization of microbial strains for targeted degradation of oily waste	25.00
48	NIR Diode Array (Variable wavelength) with Thermal measurement unit	1	Photothermal therapy study	25.00
49	Hydrogenation reactor high pressure reactor	1	To study biomass conversion, hydrogen storage, fuel production, catalyst development, chemical synthesis.	25.00
50	Polymer film Conductivity meter	1	To measure ionic conductivity of polymeric thin film	25.00

51	Ultra-deep freezer (-80 ^{O}C)	2	Capacity: Minimum 500 L Efficient compressor control system reduces cycle times to lower energy consumption and increases freezer longevity. Should have stainless steel interior for easy cleaning during maintenance and defrost cycles. 5 compartments with 5 inner doors for easy sample access and effective insulation shield	24.00
52	Biosafety cabinet	3	Should have stable and self-compensating airflow, despite building voltage fluctuations & filter loading UV lamp for decontamination Airflow sensor to alert the user if airflow is sufficient for greater safety Alarm for unsafe sash conditions Ergonomically-designed raised arm rest to prevent grille blocking Isocide powder coat that inhibits microbial growth	24.00
53	Plasma cleaner with accessories	1	Compact table top unit, RF power 30 W or more, Pyrex sample tray, Dry vacuum pump. Used for surface cleaning, and activation. Can be used in substrates of polymer, paper, membranes, glass, metals, etc.	20.00

54	Multimode Microplate Reader	1	01 Multimode reader is required for the in vitro screening facility with speed and ultrahigh performance. Variable bandwidth quad monochromators will help to provide ultra-fast measurements with excellent in vitro enzyme/ cell-based results.	20.00
55	Rotary evaporator	2	02 Number of Rotary Evaporator as our group lack this instrument since beginning and this instrument is essential for running daily operations.	20.00
56	Shaker Incubator	2	To carry out routine work related to bioremediation and for growth kinetic studies of bacteria/fungus/algae and their cultivation process optimization	20.00
57	Plasma cleaner with accessories	1	Compact table top unit, RF power 30 W or more, Pyrex sample tray, Dry vacuum pump Used for surface cleaning, and activation. Can be used in substrates of polymer, paper, membranes, glass, metals, etc.	20.00
58	PEM Electrolyser	1	To determine the efficiency of electrocatalyst in Hydrogen gas generation.	20.00

59	Rotating Ring Disk Electrode (RRDE) system with all accessories	1	Rotating Ring Disk Electrode system (motor + shaft) with Rotation controller for electrode rotation of 100 to over 2000 rpm. Accuracy of ±1 rpm, and with a gas purging system. The RRDE is an important tool for characterizing the fundamental redox properties of electrocatalysts for fuel cells, hydrogen production by water splitting, electrochemical sensor development etc	20.00
60	Thin polymer filmmaker for large-size film (Customized equipment)	1	This equipment will be required to prepare a polymer thin film with a desired thickness in solvent-free conditions. •Suitable for making > 250 cm¬2 size polymer film •Working temperature: 25 to 180 oC. •Thickness: 100 to 1000 microns	20.00
61	Accessories of UTM		Digital Channel: Frequency Type: 04 Channel, Counter Type: 02 Channel and the facility to convert counter channels to frequency channels & vice versa should be provided.	20.00

62	Vertical tubular furnace		Brief Specification: Temperature range: up to 11000C, Inert atmosphere provision with N2 flow, heating rate up to 50 0C/min, cooling water circulating unit with condenser Uses: Vertical tube furnaces commonly used in various scientific, industrial, and research applications (nanoparticle synthesis, heat treatment for different materials including catalysts, pyrolysis and carbonization etc) that require controlled high-temperature environments.	20.00
63	Shaker Incubator (2 No.)		An essential equipment for cultivating microorganisms, conducting cell-based experiments, and facilitating various biochemical processes in a controlled laboratory setting.	20.00
64	500ml Supercritical Extractor		To extract phytochemicals at supercritical condition.	20.00
65	Self-Standing/Tabletop Hollow fibre module and Crossflow Cell Test Setup		This combined setup is required to test developed membranes in the laboratory. The main advantage of this equipment is two types of modules can be tested on the same setup, which will be highly beneficial to our ongoing R&D work.	16.00
66	Cold Centrifuge	1	01 Cold centrifuge is required for developing the cell culture facility for preliminary screening of Natural products/extracts/fractions for their therapeutic potency.	15.00

67	Plant Tissue culture facility equipment for Genome Edited plant	1	BSTD is currently working towards developing improved crops through advanced biotechnological approaches. Currently, a tissue culture facility dedicated to raising and propagating orchids is being used at full capacity.	15.00
68	qRT-PCR	1	The equipment will be used for quantitative and qualitative real time gene expression analysis, as well as post-PCR (end point) analysis using the built-in-Peltier-based PCR machine. The machine's five color multiplexing and compatibility with all chemistries. Including SYBR green, Taqman and Molecular Beacons and Scorpion probes, will allow for quiker and more efficient gene expression ananlysis.	15.00
69	Refrigerated table top centrifuge	1	A medium capacity table top refrigerated centrifuge (4°C) accommodating 2ml, 50ml and 200ml tubes is required for DNA, RNA work and preparation of bacterial competent cells under controlled temperature	15.00

70	Automatic Outdoor Environment weather station with accessories for data analysis.	1	Specifications: Analog data input -16 with auto Ranging /compatible to adjust all given sensors Digital Channel: Frequency Type: 04 Channel, Counter Type: 02 Channel and the facility to convert counter channels to frequency channels & vice versa should be provided. Data Storage: in built facility to store minimum 15 lakh data records & facility with download the stored data on a flash /USB card Battery & Charging System: Solar panel is required for continuous recharge the batteries. A suitable in-built charge controller having over and under voltage protection should be provided in the DCP. The capacity of the Solar panel should be such that the battery can be charged with 30% to 50% sunshine. Software: Compatible and updated (latest) software to work on, activating all the sensors to generate the data including update, download and process the collected data	15.00
71	High-Temperature Viscometer	1	To study the fuel flow and combustion characteristics	15.00
72	Automatic Outdoor Environment weather station with accessories for data analysis		Analog data input -16 with auto Ranging /compatible to adjust all given sensors	15.00
73	Electro synthesizer	1	01 Number of electro synthesizers are required to carry out electrochemical applications for synthesizing various small molecules in current and future projects.	12.00

74	Penn PhD Photoreactor M2 Z744035-1EA- IN: type D 365nm, 395nm, 420nm, and 450nm Light Source Multi-Vial Holder Quad 8ml, and Penta 4ml Wheaton sample vials clear, volume 8 mL, cap size 15 - 425, diam. × H 17 mm × 61 mm amber, volume 4 mL, cap size 13 - 425, diam. × H 15 mm × 46 mm Dr. Srinivas Ambala	1	1 Number of photo reactor with all the necessary accessories are required for the use of CSIR-NEIST to perform the photo redox reactions	12.00
75	Inverted Microscope	1	01 inverted microscope is required for checking the cell growth and developing the cell culture facility for preliminary screening of Natural products/extracts/fractions for their therapeutic potency.	12.00
76	Sonicator (Both Probe and Bath)		For preparation of samples of extraction and experiment	12.00
77	Rotary evaporator	1	02 Number of Rotary Evaporator as our group lack this instrument since beginning and this instrument is essential for running daily operations.	10.00
78	Gradient thermal cycler, 96 well	2	Single block gradient thermal cycler is required in the division for PCR optimization at different gradients.	10.00
79	Digital electrochemistry meter	1	For routine analysis of samples pH/ORP/Ion/Conductivity/Resistivity/TDS/Salinity/Temp	10.00

80	Incubator for nematode culture	1	Temperature Range 4-60±0.5˚C With shaking facility for liquid culture Should have programmable multi-steps	10.00
81	CO2 incubator for mammalian cell culture	1	Should have CO2 control range from 0.2 to 20% with control accuracy and uniformity of ±0.1% and should have rapid recovery of at least 0.7% per minutes Should have HEPA filter on CO2 inlet. Should have six-sided direct heating with fanless, gentle convection circulation to provide stable temperature control, excellent uniformity and rapid recovery with no over shoot Microprocessor controlled direct heat stackable CO2 Incubator temperature control from 4° C above ambient to 50°C, with control accuracy ±0.1°C. with high Tem. Decontamination at 120.	10.00
82	Biosafety Cabinet		Crucial for aseptic transfer of hazardous biological materials, offering containment, HEPA filtration, sterile workspace, unidirectional airflow, and minimized cross-contamination. It ensures the safety of personnel and sample integrity during handling of pathogens and infectious agents.	10.00

83	Laboratory Centrifuge		For cell separation	10.00
84	Low Temperature BOD refrigerated incubator	1	temperatures range: from -10° to +60°C Microprocessor control with easy-to-read display shows actual temperature within 0.1°C Push-button controls for temperature set point selection RTD temperature probe and protected set point mode prevent accidental temperature change Forced-air circulation delivers excellent temperature stability Insulation CFC-free, foamed polyurethane	8.00
85	Refrigerated Centrifuge		The refrigerated centrifuge is essential in nanoparticle research for precisely separating nanoparticles from solvent or impurities, maintaining stability and preventing aggregation during centrifugation. The controlled cold environment ensures the preservation of nanoparticle integrity and allows for accurate characterization and analysis of their properties, which is crucial for advancing nanotechnology applications in various membrane applications.	8.00

86	Inverted Trinocular microscope	1	Inverted microscopes are a highly effective tool for observing living cells or organisms at the bottom of a large container, such as a tissue culture flask. Unlike a conventional microscope, which relies on glass slides, an inverted microscope allows for more natural conditions to be maintained, making it an ideal choice for studying samples in their true environment.	6.00
87	UV spectrophotometer		For precise estimation of enzyme activity, cell growth dynamics, and a plethora of other crucial applications.	6.00
88	Double Door Refrigerator		For storage different chemicals, extracted phytochemicals for longer shelf life.	6.00
89	Peristatic Pump		To use in fixed bed adsorption column for maintaining the constant flow rate	6.00
90	Ultrasonic Pulse Velocity (UPV) Instrument	1	UPV investigates the structural Integrity of a wide range of materials, like concrete, refractories, ceramics, timber, etc. UPV can be used in the laboratory or on-site to investigate uniformity, cavities, cracks, fire/frost damage, delamination, and deterioration. UPV measures transit time and pulse velocity to provide information on the uniformity of concrete, cavities, cracks, and defects.	5.00

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92	Ultrasonic Pulse Velocity (UPV) Instrument	1	UPV investigates the structural Integrity of a wide range of materials, like concrete, refractories, ceramics, timber, etc. UPV can be used in the laboratory or on-site to investigate uniformity, cavities, cracks, fire/frost damage, delamination, and deterioration. UPV measures transit time and pulse velocity to provide information on the uniformity of concrete, cavities, cracks, and defects	5.00
93	Refrigerator (-80°C)		For storage of microbes/cells/biological samples.	5.00

94	Quartz Cabinet Distillation Unit		A Quartz Cabinet Distillation Unit is a compact and efficient apparatus designed for laboratory-scale distillation of liquids. Its quartz construction offers excellent thermal resistance and chemical inertness, making it suitable for various applications, including purification of solvents, concentration of solutions, and isolation of volatile compounds. This unit is helpful for small-scale distillation processes, ensuring precise control over purification and separation procedures while minimizing sample loss.	5.00
95	Benchtop Laboratory Fume Hood		Chemical fume hood provide essential containment and ventilation to safely handle hazardous chemicals, preventing exposure to toxic fumes, vapors, and particles in our laboratory environments.	5.00

96	Air Entrainment Meter	1	It consists of a pressure-tight flanged cylindrical measuring bowl, fitted with a removeable flanged and a conical cover assembly with a seal in-between. The conical cover has an air valve and a pet cock for bleeding-off the water. A cylindrical stand pipe, which is graduated in per cent air content, is fixed on the conical cover assembly. Required pressure is applied to the specimen with the help of a pressure bulb. The whole assembly is mounted on a flat base. Each apparatus is supplied complete with a calibrating cylinder, pressure gauge, funnel, trowel and tamping bar. Supplied with Foot Pump in place of Pressure Bulb as supplied with other models. Application: For the measurement of percentage of air in the cement/ concrete	3.45
97	Abrasion Resistance of Concrete	1	Applications: For determining the relative resistance of concrete(including concrete overlays and impergnated concrete) to abrasion under water. Abrasion Charge Method-For determining the relative resistance of a concrete surface by finding the abrasion loss of the specimen subjected to an abrasive charge.	3.14

98	Abrasion Resistance of Concrete	1	Applications: For determining the relative resistance of concrete(including concrete overlays and impergnated concrete) to abrasion under water. Abrasion Charge Method-For determining the relative resistance of a concrete surface by finding the abrasion loss of the specimen subjected to an abrasive charge	3.14
99	Unconfined Compression Tester, Proving Ring Type	1	It is used to determine soil shear strength.	3.00
100	Unconfined Compression Tester, Proving Ring Type	1	It is used to determine soil shear strength.	3.00
101	Unconfined Compression Tester, Proving Ring Type	1	It is used to determine soil shear strength.	3.00
102	Accelerated Curing Tank	1	Description: For cooling and boiling water method) Temp. Range: 10°C to 100°C Accelerated Curing Tank for 6 cubes of 150 mm, 10°C to 100°C (with cooling & heating system) (AIM 355-1 ACB-C) Accelerated Curing Tank for 12 cubes of 150 mm, 10°C to 100°C (with cooling & heating system) (AIM 355-2 ACB-C) Application: For accelerated curing of concrete samples	2.66

103	Accelerated Curing Tank	1	For cooling and boiling water method) Temp. Range: 10°C to 100°C Accelerated Curing Tank for 6 cubes of 150 mm, 10°C to 100°C (with cooling & heating system) (AIM 355-1 ACB-C) Accelerated Curing Tank for 12 cubes of 150 mm, 10°C to 100°C (with cooling & heating system) (AIM 355-2 ACB-C) Application: For accelerated curing of concrete samples	2.65
104	Rebound Test Hammer	1	This instrument is used for non-destructive estimation of concrete strength properties, standardized in every major region.	2.38
105	pH/conductivity meter.		Basic laboratory equipment useful while preparing media, buffer solutions, protein precipitation experiments, enzyme activity estimation.	2.00
106	Rebound Test Hammer	1	This instrument is used for non-destructive estimation of concrete strength properties, standardized in every major region.	1.50
107	Rebound Test Hammer	1	This instrument is used for non-destructive estimation of concrete strength properties, standardized in every major region.	1.50
108	Refrigerator (-20°C) 2 No.		For biological samples storage.	1.00

109	Demountable Mechanical Strain Gauge	1	Description : Suitable for use on a loading member under adverse conditions Demountable measuring head Portable High accuracy Reference Test Bar incorporated These are designed for gauge lengths of 100, 150 or 200 mm of the reference pins. Supplied complete with AIM 070 dial gauge 0.002x5mm or AIM 072-DG Dial gauge Digital 0.001 x25 mm. Complete in a case. Application: Used for Strain Measurement	0.60
110	Air Entrainment Meter	1	Description: It consists of a pressure-tight flanged cylindrical measuring bowl, fitted with a removeable flanged and a conical cover assembly with a seal in-between. The conical cover has an air valve and a pet cock for bleeding-off the water. A cylindrical stand pipe, which is graduated in per cent air content, is fixed on the conical cover assembly. Required pressure is applied to the specimen with the help of a pressure bulb. The whole assembly is mounted on a flat base. Each apparatus is supplied complete with a calibrating cylinder, pressure gauge, funnel, trowel and tamping bar. Supplied with Foot Pump in place of Pressure Bulb as supplied with other models. Application: For the measurement of percentage of air in the cement/ concrete	0.35

111	Compaction Factors Apparatus	1	Description: Compaction factor is the ratio of the weight of partially compacted concrete to the weight of the concrete when fully compacted in the same mould. The weight of partially compacted concrete in relation to its fully compacted state is a reasonably good indication of the workability of concrete Application: For determination of workability determination of concrete mixes of very low workability such as those normally used with concrete	0.30
112	Compaction Factors Apparatus	1	Compaction factor is the ratio of the weight of partially compacted concrete to the weight of the concrete when fully compacted in the same mould. The weight of partially compacted concrete in relation to its fully compacted state is a reasonably good indication of the workability of concrete Application: For determination of workability determination of concrete mixes of very low workability such as those normally used with concrete	0.29

113	Longitudinal Compressometers	1	Description: This apparatus is used for determination of the strain and deformation characteristics of cement concrete cylindrical specimens of 150 mm dia x 300 mm length. The Compressometer consists of two frames for clamping to the specimen by means of five tightening screws with hardened and tapered ends. Two spacers hold the two frames in position. An adjustable pivot rod rests on pivot screws. A spring enables the pivot rod to remain in contact with pivot screws. The ball chain is for adjusting the tension of the spring. A dial gauge, fixed to a bracket, fitted to the top frame, is used for taking deformation measurement. Supplied complete with AIM 070 dial gauge 0.002x5mm or AIM 072-DG Dial Gauge Digital 0.001 x25 mm. Application: For determination of the strain and deformation characteristics of cement concrete cylindrical specimens of 150 mm dia x 300 mm length	0.20

114	Longitudinal Compressometers	1	This apparatus is used for determination of the strain and deformation characteristics of cement concrete cylindrical specimens of 150 mm dia x 300 mm length. The Compressometer consists of two frames for clamping to the specimen by means of five tightening screws with hardened and tapered ends. Two spacers hold the two frames in position. An adjustable pivot rod rests on pivot screws. A spring enables the pivot rod to remain in contact with pivot screws. The ball chain is for adjusting the tension of the spring. A dial gauge, fixed to a bracket, fitted to the top frame, is used for taking deformation measurement. Supplied complete with AIM 070 dial gauge 0.002x5mm or AIM 072-DG Dial Gauge Digital 0.001 x25 mm. Application: For determination of the strain and deformation characteristics of cement concrete cylindrical specimens of 150 mm dia x 300 mm length	0.20

115	Concrete Penetrometer, Spring Type (AIM 338)	1	Description: The design of concrete mix aims at maximum durability for the conditions prevailing at the site where it is to be used. ability to resist the flow of water through, is one of the important durability characteristics. The permeability is determined on cement. mortar and concrete specimens, either cast in the laboratory or obtained by cutting out cores from existing structures. The Permeability test is carried out as per the standard IS:3085 and US Bureau of Reclamation. Application : For Setting Time By Penetration Resistance	0.10
116	Concrete Penetrometer, Spring Type (AIM 338)	1	The design of concrete mix aims at maximum durability for the conditions prevailing at the site where it is to be used. ability to resist the flow of water through, is one of the important durability characteristics. The permeability is determined on cement. mortar and concrete specimens, either cast in the laboratory or obtained by cutting out cores from existing structures. The Permeability test is carried out as per the standard IS:3085 and US Bureau of Reclamation. Application : For Setting Time By Penetration Resistance	0.09