

Procurement Plan for RRCAT 2024-25			Annexure - II
Sr. No.	Item	Quantity	Cost (Rs in lakhs)
1	Chiller Systems		
1.1	Air-cooled screw water chiller, Water Chiller Systems, Precision Chillers, related materials and accessories	Assorted	150
2	Cryo Components		
2.1	Cryogen-free Magneto-Optic cryostat	1 Set	190
2.2	Cry cooler	1 Set	80
2.3	Recovery Compressor and reliquifier systems	Assorted	200
2.4	Helium Gas Cascade	1 Set	203
2.5	Cryostat	1 Set	400
3	Electrical equipment		
3.1	Power supplies for magnets, lasers and sub systems, control systems, pulsers etc	Assorted	515
3.2	High capacity UPS systems with battery backup	Assorted	185
3.3	Fabrication of CCU	15 nos.	50
3.4	Fabrication of PGU	10 nos.	50
3.5	Spectrum Analyzer and LISN	2 Set	70
3.6	Electrical switchgear and cables	Assorted	50
3.7	HV/HF Transformer & inductors, capacitors, power supplies, HV energy storage capacitors, auto transformer, etc	Assorted	100
3.8	RG Analyser	1 set	50
3.9	Thermal insulation, heating modules, etc	Assorted	25
3.10	Power supply components and accessories like switch gears, flow switches, current sensors, capacitors, cores, electronic cards, optical fiber cable etc, Power circuit modules, power supply boards & upgradation, Spares of Power Conditioning System and maintenance, spare thyratrons, switches, Diodes, Pulse components, cabinets, magnetic cores measuring devices, DC/ pulsed DC power supplies	Assorted	240
3.11	AMC of power conditioning systems (PCS) and Electrical Distribution System of Indus Complex	Jobs	135
3.12	Electrical Cables of small sizes	Assorted	70
3.13	Semiconductor switching devices / Power converters	Lot	40
3.14	Spares for LT installations, substations	Lot	100
3.15	RF source, MW waveguide (WG) components, WG pressure handling and SF ₆ systems, window, loads, circulators, couplers, modulator and HV components, thyratrons, RF tube, RF transistors, RF cavities, semiconductor, solid state switches, RF cable, connectors, development of MW system components, Electron guns, power supplies, tuning and measuring instruments and set-ups, test stands, spares	Assorted	500
3.16	Solenoid Magnets (~ 4 to 6 m length)	Assorted	50
3.17	Data Centre with power backup, cooling solution, fire alarm and suppression	Assorted	475
3.18	High power pulsed CCPS based modulator for microwave system	1 set	300
3.19	Miscellaneous items and services for electrical installations, HV transformers and Inductors, Wires, cables & connectors	Assorted	360
4	Electronics / Controller		
4.1	Electronic systems and components including laser diodes, Galvano- mirror, IGBTs, Mosfets, Ignitrons, HV probes, Differential probes, current probes, PLC, PXI, VME, network instruments like Serial to Ethernet converters, media converters, spares for Undulators, etc., Planar triodes, Boards for LLRF	Assorted	740
4.2	Acousto-optic Modulators	4 Nos.	20
4.3	High sensitivity EMCCD Camera, CCD camera, Machine vision camera	2 Nos.	50
4.4	Spatial Light Modulator	1 No	50
4.5	Locking electronics (ULE/Frequency comb, etc.)	Assorted	25
4.6	Frequency standard	1 Nos	20
4.7	PXI Controller and modules	1 Set	25
4.8	PXI Controllers chassis	2 Set	25

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Sr. No.	Item	Quantity	Cost (Rs in lakhs)
4.9	Digital Control system and accessories, Automation & Control System	1 set	150
4.10	Trace Water Vapour Sensor	1 Set	50
4.11	Streak camera electronics, Motor control system, 3 axis setup and its control, Sensors, software, Electrometers, drives, translation stages, controllers, stepper motor drives, LD driver	Assorted	70
4.12	Laser diode driver (CW) & with temperature controller, AO/EO Q-switch driver	Assorted	20
4.13	Hall probes/sensors, Source measure unit	Assorted	20
4.14	Radiation instruments and calibrators like Pico Ampere Source and Meter, HPGe/Nal(Tl) based gamma spectrometry systems, Radiation Survey meters, amination monitors, Ion chamber with electro meter, Ultrasonic probe sonicator and other HPU equipment, Various safety systems, Video Surveillance System, Radiation Safety Interlock System, dosimetry devices, TLD dispensing units, workbenches, Personal safety interlock system etc	Assorted	180
4.15	Test and measurement instruments like Oscilloscopes signal generators, Digital Multi Meter (DMM), spectrum analyser , high voltage probe etc.	Assorted	100
4.16	Process instrumentation items like Flow meters, Temperature sensor, level sensors, transmitters etc., Consumables and accessories for system integration like multi-core cables, enclosures etc.	Assorted	100
4.17	RF components and hardware like MOSFETs, cables, , controller, Circulators, Directional couplers, RF sensors and power meters, High power dummy loads, DC Supplies with accessories, HV Solid State switches, Waveguide components, Miscellaneous , digital LLRF components and accessories etc.	Assorted	120
4.18	Misc. electrical/electronic items like electronic tilt meter, portable gauss meter, thermal switches/sensors , temperature controllers, connectors terminal blocks, microcontroller modules etc., position sensors laser modules, LaB6 cathode, optical components, batteries, air compressor and receivers, testing accessories, spare parts of PC and photocopiers etc.	Assorted	70
4.19	Annual maintenance Contracts (AMCs) for Work stations, PCs, Servers, LFDs, Undulator control system, UPS, Photocopier, Fire Alarm System (FAS), Electrical Distribution system, Public Address System, Laser Tracker (Absolute tracker), CMM, CCTV system Old and new and LCW plant instrumentation	Jobs	65
4.20	Thyratron	4 Nos.	80
4.21	Electronic Security Systems	1 set	50
4.22	DG set controllers, substation automation system	Assorted	25
5	IT equipments / Software		
5.1	Workstations, PCs, firewall, network switches, tape library, LFDs, NAS, HDDs, memory modules , Centralized Scientific Computing Servers and related accessories and spares	Assorted	350
5.2	Software license and update packs for Operating System, network security, NMS, IDS/IPS, antivirus, data backup solutions, Database management system, SCADA system, FPGA and miscellaneous software tools & applications., Software development tools, Workstation for data acquisition system, Feedback System etc and Communication accessories	Assorted	100
5.3	High Performance Computing Cluster	1 set	3200
5.4	Malware Analyzer Sandboxing servers	4 Nos.	30
5.5	Servers and storage for centralized sharing facility	1 set	40
5.6	Next Generation Information Management Servers	6 Nos.	40
5.7	Design and Analysis Softwares including FEA, CAD and Cryogenic Softwares	1 Set	50
5.8	Perpetual license of software for 3-D Electromagnetic design and analysis of radiofrequency accelerating structures.	Jobs	80
6	Machine		
6.1	Oxide layer deposition system	1 set	396
6.2	Plant requirements like pumps, tools and tackles, consumables, pipes and fittings, pump motors and valves etc.	Assorted	85

Procurement Plan for RRCAT 2024-25			Annexure - II
Sr. No.	Item	Quantity	Cost (Rs in lakhs)
6.3	Annual maintenance Contracts (AMCs) for Air cooled chillers, Water cooled chillers, Compressors, Air dryers, Air Washer units, turnstile gates, water treatment plant, LCW Plants, DG set, Electric Vehicles (EVs) etc.	Jobs	114
6.4	High precision CNC machining centre	2 Set	400
6.5	HV power supplies, controllers, meters, PCB prototyping, photocopier, Miscellaneous lab instruments, etc	Assorted	25
7	Materials		
7.1	Chemicals and gases, Ultra-high Purity Nd2O3 Powder, Helium Gas	Lot	280
7.2	Energy Storage capacitors, Capacitors (High Voltage Ceramic Capacitors, Electrolytic, Tantalum etc)	Assorted	75
7.3	Meta-phosphates (Al, Ba, K)	Lot	225
7.4	Invar components, SMAs, gaskets, Ferrite cores, Machine tools, misc. items of hydraulic circuits and components of actuation system, Spares of alignment instruments and accessories,	Lot	45
7.5	Austenitic stainless steel/ aluminum , carbon steel knife edge flanges/ blanks, copper etc.	Assorted	300
7.6	Welding/ brazing alloys, accessories, fine metal powders and other consumables etc.	Lot	25
8	Mechanical Equipments		
8.1	Compressed Air System (CAS)	1 Set	25
8.2	Cleanroom motorized pallet	1 set	85
8.3	Mechanical systems and components, Mechanical hardware, cabinets,	Assorted	200
8.4	Growth chamber assembly for crystal puller	1 Set	130
8.5	Optical Table with vibration isolation	3 Set	55
8.6	DPH Platinum Vessel	1 set	770
8.7	Long trace profilometer	2 Nos.	860
8.8	Opto mechanical components / movement mechanism / encoders / fiber components / galvo scanner	1 Set	90
8.9	DI plant, High temp. vacuum furnace, High temp. substrate rotation, Chillers, Vibration isolation tables, vacuum pumps, ultra-sonic / mega sonic cleaning, Valves, Laboratory glassware washer, etc	1 Set	50
8.10	Plasma chambers	1 Set	150
8.11	Plasma mirror chamber	1 Set	110
8.12	Conventional measuring instruments- granite V-block, flatness instruments, coincidence level gauge, linear calibration setup, Internal thread profile measuring instruments	Assorted	80
8.13	Electromagnets, yokes, focusing coils, steering coils, energy filtering magnet, scanning magnet, normalizing magnet, Quadrupole magnets, soft iron, precision alignment supports, energy limiting system, test benches, measurement slits, power supplies, sensors, measuring devices, measurement and experimental set-ups, beam diagnostics and slit systems etc.	Assorted	200
8.14	LN2 Storage dewars as per design	1 Set	50
8.15	Insulated Containers with PUF/EPS/XPS/Glass wool/VIP insulation.	1 Set	20
8.16	Assembly Rails with bearings, Fixtures, Lifting Beam, Vessel Support Jacks, Tools, Scissor Lift, Conductivity Greases, End Cap Tooling, Fabricated structure, Shock Isolators etc. drawing and specification	1 set	50
8.17	EOT Crane System	1 set	30
8.18	Fabrication of proton linear accelerator components	Assorted	90
8.19	Electron Beam Welding machine	1 set	2000
9	Optics and Optical equipments		
9.1	Optics (Dichroic mirror, Lens, Waveplates, PBS, beamsplitter, achromatic doublet, filters, etc.) Optomechanical components (Translation stages, mounts, shutter, chopper, pinhole, alignment tools, etc.)	Assorted	260

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Sr. No.	Item	Quantity	Cost (Rs in lakhs)
9.2	Optical Fibers and Fiber delivery systems (Fiber port cluster), Photosensitive optical fibers and preform, Raman Sensor and fiber gratings, rare earth doped fiber, Fiber Interrogator development systems, Fiber coupled laser diodes for fiber laser, Narrow spectral width, broad band, nanosecond, picosecond seed sources, Cooling platforms, Photodetectors, phase mask, fiber for LIBS, software, data acq. Card, OSA	Assorted	370
9.3	Rydberg laser in range of 400 – 500 nm	2 Nos.	200
9.4	Fixed frequency Laser System at 780 nm, ~ 2.0 W	1 Nos	110
9.5	Tunable Laser System in range of 700 -1100 nm	2 Nos.	60
9.6	Dipole trap laser 810 nm	1 Nos.	100
9.7	Low power Extended cavity diode laser, 780 nm, 150 mW	2 Nos	30
9.8	Lasers (Raman Spectroscopy)	2 Nos.	40
9.9	Zerodur blanks, Fused Silica blanks	Lot	400
9.10	Silicon substrates	Lot	50
9.11	High power laser diode bar (CW), QCW & fiber coupled laser diodes, LD arrays/stacks, seed laser diodes (CW & pulsed)	Assorted	50
9.12	Non-linear crystals / Harmonic converter, SHG Crystals, Nd:YAG rods, Yb:YAG disks, Laser rods and disks, PPLN crystals	Assorted	53
9.13	Fiber optic Acoustic optic, Intensity and phase modulators	Assorted	30
9.14	Low power and high power Fiber optic components in single clad/double clad/ large mode area fibers, Gain fibers Yb, Tm/Ho, Er doped, Passive optical fibers	Assorted	35
9.15	Bulk unpolarized and polarization optics, Nonlinear crystals, Acousto optic modulators with controllers for fiber laser, miscellaneous opto-mechanical components	Assorted	65
9.16	PW mirror	Assorted	100
9.17	PW Pockel cell	2 Nos	50
9.18	PW focussing Optics	Assorted	150
9.19	Ti:sapphire gain medium	2 Set	100
9.20	PW Polarizers	5 Set	50
9.21	Photosensitive optical fibers/preform	5 km	30
9.22	Cylindrical References	3 Nos	150
9.23	Angle Dekkor	1 No.	75
9.24	Photolithography system (laser writer)	1 set	36
9.25	FTIR spectrometer	1 set	24
9.26	KrF Excimer Laser System	1 set	168
9.27	Upgradation of THz-TDS facility for precision synchronization with the IR-FEL in RRCAT	1 set	200
9.28	Fs-laser based FBG fabrication facility	1 Set	560
9.29	ASE Source and broadband tunable Sources, Optical instruments (scratch dig system, Fizeau Interferometer, Spectrophotometer, , Ellipsometer, spectral response setup), Wavelength meter, OSA, beam profiler based on Rayleigh scattering	Assorted	80
9.30	Calibration unit, characterization setup for photodetectors, Energy/power meter, displays, spectrographs/photodiode/CCDs,	Assorted	20
9.31	Laser diodes, single transverse and longitudinal mode laser, Fiber seed laser, Laser for lithography, diode laser source for PCI, cavity ringdown and scatterometer, Femto second oscillator, diode pump gain module	Assorted	80
9.32	Fusion splicing machine for large diameter fiber	1 Set	40
9.33	Portable fusion splicing machine for large and small diameter fiber, Optical fiber processing equipment	1 Set	40
9.34	CO ₂ laser based end cap fabrication system	1 Set	50
9.35	Auto correlator (at 1, 1.5 and 2.0 μ m)	1 Set	20
9.36	AO Q-switch with compatible RF driver	1 set	197
10	Vacuum / UHV related		

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Sr. No.	Item	Quantity	Cost (Rs in lakhs)
10.1	Vacuum Components (Gauges, getters, chamber, viewports, gate Valves, Flanges, Gaskets), Vacuum Hardware (Vacuum Valves, Seals, Flanges, Metallic bellows, feedthroughs, Ceramic Components, Fasteners etc), Vacuum Gauges including Penning Gauge, Pirani Gauge, Capacitance Manometers, Magnetron Gauge, Cathode Gauges etc. and Vacuum Systems e.g. RGA, MSLD etc.	Assorted	200
10.2	TMP Stations with controllers, TMP, Sputter Ion Pump and Titanium Sublimation Pump (TSP) Controllers & Cables	Assorted	400
10.3	Ceramic Chambers	2 Nos.	50
10.4	Femto Ampere Source, low current measurement system & Calibration system	Assorted	80
10.5	UHV Gauge (BAG) Controllers & Cables	Assorted	100
10.6	Vacuum chamber and associated components	Assorted	200
10.7	Helium Leak Detector	1 set	20
10.8	Compact vacuum pumps (SIP and TMPs)	Assorted	50
10.9	Plasma-enhanced chemical vapor deposition (PECVD) system	1 Set	260
10.10	Single Channel Vacuum Compatible Energy Dispersive Detectors	2 Set	70
11	Others		
11.1	Arc welding machines and automation, Fiber laser welding	Assorted	50
11.2	2D materials Transfer system and accessories	Assorted	40
11.3	Cleanroom facility for fs-laser based fiber grating fabrication facility, Clean Room Equipment and Consumables	Assorted	260
11.4	AMC , Repairs other than AMC for systems, equipment and instruments etc	Jobs	70
11.5	Cavity component machining and fabrication	Assorted	200
11.6	Magnetic shield	30 Nos	750
11.7	Outsourcing of : A) Technical activities including designs, precision assemblies, engineering, testing, installation, facility and lab operations, intermediate maintenance and laboratory activities. B) Office operations, housekeeping, using scientific procedures	Jobs	100
11.8	Acid digester, chemicals, miscellaneous XRF equipments, sample preparation items etc.	Assorted	70

Procurement Plan for RRCAT 2025-26			Annexure - II
Sr. No.	Item	Quantity	Cost (Rs in lakhs)
1	Chiller Systems		
1.1	Chiller, Precision Chillers, chilled water system and components	Assorted	400
1.2	Chemicals, reagents, gases and special materials, evaporator material, targets, DLI precursors	Lot	55
2	Cryo Components		
2.1	Cryogenic systems, Cryo equipments, Components and accessories of cryogenic system like - cryo-coolers, helium dewars, gasbags, helium, compressors, chiller etc., Cryogenic Valves, Relief Valves, Gate Valves, Liquid Level Sensors, Bayonets, Heat Exchangers, Pressure sensors, Temperature Sensors, Thermal Straps, MLI etc. as specified in the final drawings and procurement specifications released by Fermilab	Assorted	600
2.2	Cryogenic components and other mechanical components for beam line optics	Lot	500
3	Electrical equipment		
3.1	Power supplies for magnets, lasers and sub systems, control systems, pulsers etc	Assorted	550
3.2	Thyratron with trigger units, Spares of Power Conditioning System and maintenance, spare thyratrons	Assorted	90
3.3	Pulse transformer and PFN assembly	1 set	50
3.4	Spectrum Analyzer and LISN	1 No.	50
3.5	Test bench for calibration of sensors, Sensors	2 Nos.	60
3.6	Electrical switchgear and cables	Assorted	160
3.7	HV/HF Transformer & inductors, capacitors, power supplies, HV energy storage capacitors, auto transformer, etc	Assorted	50
3.8	High Temperature RF melting furnace	1 Set	150
3.9	E beam evaporation unit	1 Set	70
3.10	Supercapacitor fabrication & testing system	1 Set	20
3.11	Thermal insulation, heating modules, etc.	Lot	35
3.12	Fiber draw tower	1 No.	1000
3.13	Laboratory Glassware Washer	1 No.	25
3.14	Flash lamps	Assorted	50
3.15	AMC of PCS Indus Complex, Public Address System , DG set , Electrical Distribution System of Indus Complex	Jobs	150
3.16	Procurement of DG set	1 Set	60
3.17	Spares for electrical panels, switchgears , cables and substations	Assorted	250
3.18	Semiconductor switching devices / Power Converters , HV diode, High current DC CT , Power quality analyzer	Assorted	75
3.19	Manufacture test platforms for developing and testing RF powering system designs: RF source, MW waveguide (WG) components, WG pressure handling and SF ₆ systems, window, loads, circulators, couplers, modulator and HV components, thyratrons, RF tube, RF transistors, RF cavities, semiconductor, solid state switches, RF cable, connectors, development of MW system components, guns, power supplies, tuning and measuring instruments and set-ups, test stands, spares	5 Set	150
3.20	Miscellaneous items and services for electrical installations and maintenance	Assorted	514
4	Electronics / Controllers		
4.1	Fluorescence Lifetime measurement set up	1 Set	100
4.2	Thermal conductivity measurement, Thermal Imager / Pyrometer	Assorted	120
4.3	Gas analyzer	1 No.	60
4.4	Vector network analyser (VNA), Function generators and Signal generator, spectrum Analyser, power meter	Assorted	100
4.5	Electronics Misc. components, Digital electronic components, Semiconductor devices, Power IGBTs, Mosfets, Bridges, Diodes, Ignitrons, driver HV probes, Differential probes, current probes etc, boards	Assorted	400
4.6	Computer controlled translation stages	Assorted	50
4.7	Tunable Laser System in range of 700 -1100 nm	2 Set	60

4.8	Low power Extended cavity diode laser, 780 nm, 150 mW	2 Set	30
4.9	Wave-meter with external calibration and linewidth analyser, High dynamic range Spectrophotometer (375nm to 2700 nm)	1 Nos.	280
4.10	Acousto-optic Modulators, Electro-Optic Phase modulators	8 Nos	100
4.11	RF and microwave sources with amplifiers	3 Nos.	75
4.12	CCD camera , Beam diagnostic devices of linacs: Profile & current monitors, position, energy, dose uniformity measurement, cameras, ICCD, beam position monitors, beam slit monitors, emittance monitors, beam scan measurements	Assorted	80
4.13	Locking electronics (ULE/Frequency comb, etc.)	Assorted	15
4.14	Detectors (APDs, photodiodes, PMTs), photon counter, Sensors & Actuators	Assorted	160
4.15	365 nm LED/Laser (UV source), Lasers (Raman Spectroscopy), Lasers for ROFDTs and DAS	Assorted	80
4.16	High end Data Acquisition System, PLC & Data Acquisition hardware	Assorted	110
4.17	Glass Melting Furnace	1 Set	350
4.18	Sputter Coater for 0.5 m diameter optics	1 Set	540
4.19	Aperture stitching Interferometer for 0.5 m diameter optics	1 Set	870
4.20	High dynamic range Scatterometer	1 Set	85
4.21	High resolution Refractometer	1 Set	100
4.22	Streak camera electronics, Motor control system, 3 axis setup and its control, Sensors, software	Assorted	60
4.23	Laser diode driver (CW) & with temperature controller, AO/EO Q-switch driver	Assorted	50
4.24	He leak detectors, Ultra Sonic Flaw detector, Hall probes/sensors, Source measure unit	Assorted	50
4.25	Area Radiation Monitors (ARM), Electrometer for ARM, Various radiation instruments and calibrators like Pico Ampere Source and Meter, HPGe/NaI(Tl) based gamma spectrometry systems, Radiation Survey meters, Radiation contamination monitors, Ion chamber with electro meter, Ultrasonic probe sonicator and other HPU equipment	Assorted	100
4.26	Lab calibration instruments of LCW	Assorted	65
4.27	Laser Trackers	1 Set	180
4.28	UHV Gauge (BAG) Controllers & Cables, Radiation Resistant Residual Gas Analysers	Assorted	75
4.29	TMP, Sputter Ion Pump and Titanium Sublimation Pump (TSP) Controllers & Cables	Assorted	80
4.30	Test and measurement instruments like Oscilloscopes signal generators, Digital Multi Meter (DMM), spectrum analyser , high voltage probe etc., LCR meter, Digital storage Oscilloscope, HV Probes, Current Probe, Test & Measuring Instruments, 6 GHz Digital storage oscilloscope	Assorted	275
4.31	General purpose electronic components like semiconductor devices, analog ICs, digital ICs, mixed signal ICs and programmable devices, HV amplifiers, motors, DC power supplies, cards like DAQ, VME CPU, VME input/output etc., systems like PLC, PXI, VME etc. and network instruments like Serial to Ethernet converters, media converters ,spares for Undulators,Precision Timing System , etc.	Assorted	500
4.32	Various safety systems, HP devices their accessories and spares like Video Surveillance System, Radiation Safety Interlock System, dosimetry devices, TLD dispensing units, workbenches, Personal safety interlock system etc	Assorted	163
4.33	LCW plant process instrumentation items like flow meter cum switches, DAQ hardware, PID controllers, Consumables and accessories for system integration like multi-core cables, enclosures etc.	Assorted	130
4.34	RF components and hardware like MOSFETs, cables, , controller, Circulators, Directional couplers, RF sensors and power meters, High power dummy loads, DC Supplies with accessories, HV Solid State switches, Waveguide components, Miscellaneous , digital LLRF components and accessories etc.	Assorted	350
4.35	Misc. electrical/electronic items like electronic tilt meter, portable gauss meter, thermal switches/sensors , temperature controllers, connectors terminal blocks, microcontroller modules etc., position sensors laser modules, LaB6 cathode, optical components, batteries, air compressor and receivers, testing accessories, spare parts of PC and photocopiers etc.	Assorted	50

4.36	Annual maintenance Contracts (AMCs) for Work stations, PCs, Servers, LFDs, Undulator control system, UPS, Photocopier, Fire Alarm System (FAS), Electrical Distribution system, Public Address System, Laser Tracker (Absolute tracker), CMM, CCTV system Old and new and LCW plant instrumentation	Jobs	84
4.37	Upgradation of FAS	Jobs	37
4.38	Substation automation and protection system	Lot	40
4.39	Control system of Linac:DSO, PLC, SCADA and associated systems, Test and measuring equipment (Multichannel data logger, oscilloscopes, current probes, digital multi-meters, VNA, Signal generators etc.), components and electronics for control system, interlocks, process control loops and software, generating process and product release reports,	Assorted	180
4.40	Non conventional/alternate brazing facility development related to induction brazing/furnace brazing/ infrared resistance brazing	Jobs	20
4.41	X-ray detectors	3 Set	110
5	IT equipments / Software		
5.1	Circuit Simulation and PCB designing software, Software for PLC and HMI, Ab initio Electronic structure calculation code, Software development platforms, Machine vision Software development tools, Software license and update packs for Operating System, network security, NMS, IDS/IPS, antivirus, data backup solutions, Database management system, SCADA system, and miscellaneous software tools & applications., PCB design software, Design, modeling and analysis and other software	Assorted	250
5.2	Desktop PCs and Industrial PCs, Data acquisition system, Servers, firewall, network switches, tape library, LFDs, NAS, PCs, Server components: HDDs, memory modules	Assorted	200
5.3	Development environment for next generation Information management applications	Jobs	100
5.4	Distribution Switches for Network, Centralized Storage, Network Edge switches	15 Nos.	140
5.5	Site Licence for Citation Database	Jobs	50
5.6	Instrumentation devices, cabling and associate equipemnt	Assorted	80
6	Machine		
6.1	High Temperature TGA-DSC calorimeter	1 Set	150
6.2	E-beam Source with accessories and processing chamber	1 Set	800
6.3	Gas Powder Atomizer	1 Set	500
6.4	LCW plant requirements like Deaerators, pumps, heat exchangers, de-ionized water treatment plants, tools and tackle and consumables, pipes and fittings, pump motors and other spares for chillers and precision cooling systems, indoor units, Screw compressor, Spares like Control valves, Electrically actuated valves NRVs, Butterfly valves etc.	Assorted	155
6.5	Annual maintenance Contracts (AMCs) for Air cooled chillers, Water cooled chillers, Compressors, Air dryers, Air Washer units, turnstile gates, water treatment plant, LCW Plants (Indus 1 & 2), DG set of Indus complex, Electric Vehicles (EVs) etc.	Jobs	105
6.6	Winding machine	1 Set	10
6.7	CNC double column drilling tap center	1 Set	80
6.8	Ion Chromatograph, Ultrasonic & chemical cleaning and monitoring equipment's.	Assorted	70
6.9	UV-Visible Spectro photometer, Metallurgical Microscope and its accessories, Power Supplies and accessories for electroplating, Microwave Digestion system and accessories	Assorted	55
6.10	Up gradation/ maintenance of equipment and machines etc.	Jobs	25
6.11	CNC/NC plate bending machine	1 Set	90
6.12	Flourecence Microscope	1 No.	100
6.13	Integrated micro/nano-Raman, SHG, Scanning probe and Correlative Microscopy System	1 Set	390
7	Materials		
7.1	Raw material: OFE copper, Stainless steel, Tantalum, braze fillers, OFE Copper Class I UNS Alloy C10100 etc., Procurement of raw materials (austenitic stainless steel/ aluminum, carbon steel knife edge flanges/ blanks, copper) etc.	Lot	270

7.2	Iridium/ platinum lab-wares and crucibles	Lot	100
7.3	Wire bonder	Lot	36
7.4	Chemicals and gases , Ultra-high Purity Gases (Oxygen, Nitrogen. Chlorine etc.)	Lot	250
7.5	Ignitrons	4 Nos	20
7.6	Diamond tools	Assorted	180
7.7	Meta-phosphates (Al, Ba, K)	Lot	225
7.8	Ultra-high Purity Nd ₂ O ₃ Powder	Lot	20
7.9	Fumed nano-silica suspension	Lot	30
7.10	Tin laps	Lot	35
7.11	Cerium oxide polishing compound	Lot	30
7.12	Aluminum oxide polishing compound	Lot	30
7.13	Optical polishing felt laps	Lot	20
7.14	Metallic Thin foils	Lot	10
7.15	Invar components, SMAs, gaskets, Ferrite cores, Machine tools, misc. items of hydraulic circuits and components of actuation system, Spares of alignment instruments and accessories,	Lot	70
7.16	Procurement of welding/ brazing alloys, welding/ brazing accessories, fine metal powders and other consumables etc.	Lot	35
7.17	Procurement of general purpose tools, cutting tools, coolant, lubricants, oil, paint and chemicals.	Assorted	40
7.18	Nb, NbTi for HB650 cavities	Lot	2500
7.19	SS and GI pipes and pipe fittings and accessories	Assorted	50
7.20	Thermal phase change nodules, cold insulation and consumables	Assorted	100
8	Mechanical equipments		
8.1	Diamond Anvil set-up	1 Set	45
8.2	Particle shape Analyser	1 Set	80
8.3	Heating and cooling microscope stage	Assorted	50
8.4	High energy ball miller	1 No.	35
8.5	3D printing (resin)	1 Set	35
8.6	Clean room fabrication- 2 Labs	Jobs	20
8.7	Turbo blower	1 Set	30
8.8	Vibration isolation Tables, Opto mechanical components	Assorted	20
8.9	Glass Casting Moulds (Pt)	Assorted	180
8.10	Platinum Stirrers and Homogenisers	Assorted	200
8.11	5 axis Ultrasonic Grinding Machine	1 Set	1550
8.12	Cylindrical Float Polishing Machine	1 Set	150
8.13	Co-ordinate Measuring Machine (0.75m diameter)	1 Set	250
8.14	0.5 m diameter Float Polisher	1 Set	280
8.15	Opto mechanical components / movement mechanism / encoders / fiber components / galvo scanner	Assorted	130
8.16	Mechanical hardware, cabinets, Components, Miscellaneous items	Assorted	125
8.17	DI plant, High temp. vacuum furnace, High temp. substrate rotation, Chillers, Vibration isolation tables, vacuum pumps, ultra-sonic / mega sonic cleaning, Valves, Laboratory glassware washer, etc	Assorted	75
8.18	6-axis robotic machine for profile welding, XY CNC workstation and accessories etc	Assorted	50
8.19	Plasma chambers	Assorted	150
8.20	Vacuum chamber	Assorted	100
8.21	Conventional measuring instruments- granite V-block, flatness instruments, coincidence level gauge, linear calibration setup, Internal thread profile measuring instruments	Assorted	80
8.22	Diffusion bonding equipment, supersonic particle deposition, WAAM wire arc additive manufacturing and Activated TIG Facility	Assorted	100
8.23	Vacuum system of Linac: Turbo molecular pump, Sputter Ion Pump, Vacuum gauges, valves, Power supplies	Assorted	150
8.24	Linac systems for three linacs (including Microwave systems, Electron gun, Accelerating structure, Beam delivery systems, magnet systems, Vacuum systems, Power supplies, beam diagnostic systems, control systems, cooling systems, support and qualifications systems, dosimetry equipment, etc.)	Assorted	5400

8.25	High kinetic energy X-ray Photo electron Spectroscopy (XPS) system	1 Set	900
8.26	Double crystal Monochromator	1 Set	600
8.27	Air handling units, air filters and other accessories	Assorted	75
9	Optics and Optics Equipments		
9.1	BBO crystal module, PPKTP crystal module, Non-linear crystals / Harmonic converter, SHG Crystals, Nd:YAG rods, Yb:YAG disks, Laser rods and disks, PPLN crystals	Assorted	130
9.2	Optics (Dichroic mirror, Lens, Waveplates, PBS, beamsplitter, achromatic doublet, filters, etc.), Bulk unpolarized and polarization optics, Nonlinear crystals, Acousto optic modulators with controllers for fiber laser, miscellaneous opto-mechanical components	Assorted	160
9.3	Optical Fibers and Fiber delivery systems (Fiber port cluster)	2 sets	80
9.4	AR coated Glass cell	2 Nos	20
9.5	Illumination Optics for Machine vision	10 Set	45
9.6	Zerodur blanks, Fused Silica blanks	Lot	400
9.7	Silicon substrates	Lot	50
9.8	High power laser diode bar (CW), QCW & fiber coupled laser diodes, LD arrays/stacks, seed laser diodes (CW & pulsed), Electrometers, drives, translation stages, controllers, stepper motor drives, LD driver	Assorted	160
9.9	Photosensitive optical fibers and preform, Optical Fiber and Optical components for Raman Sensor and fiber gratings, Fiber optic Acoustic optic, Intensity and phase modulators, Beam delivery fiber, rare earth doped fiber, Low power and high power Fiber optic components in single clad/double clad/ large mode area fibers, Gain fibers Yb, Tm/Ho, Er doped, Passive optical fibers	Assorted	250
9.10	Ti:sapphire optics	6 Set	300
9.11	CEP Stabilized Oscillator	1 No.	500
9.12	Pyrocam, EMCCD camera	Assorted	70
9.13	Flat & Spherical References	Assorted	670
9.14	Nd:YAG laser	1 Set	40
9.15	UV-vis-NIR optical absorption setup	1 Set	60
9.16	Spectrophotometers	1 Set	30
9.17	IR-FEL based pump-probe measurement set-up including femtosecond NIR Laser with external trigger, optical components and precision time delay stages	1 Set	350
9.18	Optical breadboard tables, Optomechanical components (Translation stages, mounts, shutter, chopper, pinhole, alignment tools, etc.)	4 Set	45
9.19	CW single-frequency UV laser	1 Set	40
9.20	Wave front sensor	1 Nos.	60
9.21	Optical Spectrum Analyser	2 Nos.	50
9.22	Fiber Interrogator, ASE Source and broadband tunable Sources, Optical Detectors	6 Nos.	100
9.23	Optical components, Auto-correlators, Mirrors, Gratings, Optical glass, packaging / bonding of photodetectors, Flash lamps, Fiber gain module, EO Q-switch	1 Set	115
9.24	Fiber coupled laser diodes for fiber laser, Narrow spectral width, broad band, nanosecond, picosecond seed sources, Cooling platforms, Photodetectors, phase mask, fiber for LIBS, software, data acq. Card	1 Set	150
9.25	Optical fiber draw tower	1 Set	1000
9.26	Calibration unit, characterization setup for photodetectors, Energy/power meter, displays, spectrographs/photodiode/CCDs,	1 Set	80
9.27	Laser diodes (200-266 nm, UV), single transverse and longitudinal mode laser (1064 nm, 532 & 351 nm), Fiber seed laser, Laser lithography (1 μ m), diode laser source for PCI, cavity ringdown and scatterometer, Femto second oscillator, diode pump gain module	Assorted	80
9.28	Fusion splicing machine for large diameter fiber	1 Set	40
9.29	Portable fusion splicing machine for large and small diameter fiber, Optical fiber processing equipment	1 Set	60
9.30	Fiber amplifiers, fiber optic test equipment	1 Set	50
9.31	CO ₂ laser based end cap fabrication system	1 Set	100

9.32	Large area AFM	1 Set	270
9.33	Optical instruments (scratch dig system, Fizeau Interferometer, Spectrophotometer, , Ellipsometer, spectral response setup), Wavelength meter, OSA, beam profiler based on Rayleigh scattering	Assorted	130
9.34	Opto-mechanical equipment, Polishing machine, upgradation and its tools	Assorted	75
9.35	High energy high average power femtosecond laser	1 Set	350
9.36	Surface profiler	1 Set	55
9.37	Mirror for beam lines	1 Set	150
10	Vacuum / UHV related		
10.1	Mass spectrometer helium leak detector	Assorted	50
10.2	Storage venting system with accessories for high purity N2	1 Set	50
10.3	TMP station, Turbo Molecular pump backed by scroll pump, Compact vacuum pumps (SIP and TMPs)	Assorted	280
10.4	Plasma-enhanced chemical vapor deposition (PECVD) system	1 Set	65
10.5	Components of UHV system like feedthroughs, Sputter ion pumps, valves, scintillation screen, glass windows, ceramic gaps, bellows and their fabrication work, UHV grade stepper motor,	Assorted	115
10.6	Ultra High Vacuum (UHV) all-metal valves, UHV hardware like metal seals, bellows etc., Vacuum gauges like Pirani, IMG, BAG etc with controller & spare cardsetc. and raw Materials for UHV chambers	Assorted	130
10.7	UHV Chamber supports, Ceramic UHV Chambers, Non-Evaporable Getter (NEG) Modules, Photon Absorbers, RF-Shielded Bellows, Bake-out Heaters & accessories, Taper chambers, NEG coated chambers, Collimator and Fixed masks, WCS mechanism, Safety shutter mechanism, UHV view port, SS flexible tubes/hose, Beam viewer system, etc	Assorted	145
10.8	Mirror chambers and sub-components	2 Sets	120
10.9	Mechanical stages for full circle Goniometer	1 Set	80
11	Others		
11.1	Radiation Hutch and safety equipment	Assorted	100
11.2	Clean Room Equipment and Consumables	Assorted	230
11.3	Viedeo wall + 2 nos. interactive screen	1 Set	40
11.4	Microwave test facility infrastructure for testing high power microwave systems	Assorted	100

Procurement Plan for RRCAT 2026-27			Annexure - II
Sr. No.	Item	Quantity	Cost (Rs in lakhs)
1	Chiller Systems		
1.1	Chillers, related materials and accessories	Assorted	365
2	Cryo Components		
2.1	Components and accessories of cryogenic system like - cryo-coolers, helium dewars, gasbags, helium, compressors, chiller etc.	Assorted	200
2.2	Fabrication of Cryostats for superconducting Insertion Devices	Assorted	600
2.3	Helium gas and low temperature equipments	Assorted	170
3	Electrical equipment		
3.1	Power Supplies HV DC Capacitor charging power supply, Electromagnet power supplies, Photodiode Power supply, HPSMPS, High voltage and Low voltage power supplies, DC, Pulsed, power supplies for lasers	Assorted	450
3.2	Fabrication of CCU	10 Nos.	50
3.3	Electrical switchgear and cables .	Assorted	400
3.4	RF micro-prober station	1 Set	50
3.5	Supercapacitor fabrication & testing system	1 Set	20
3.6	Flash lamps, Thyratrons	Assorted	100
3.7	UPS Systems, Battery Banks for UPS Systems	Assorted	140
3.8	Video surveillance and radiation safety systems	Assorted	40
3.9	AMC of power conditioning systems (PCS) of Indus Complex , UPS, DG set, Electrical Distribution System	Job	75
3.10	CE immunity test setup, ESD immunity test setup	Assorted	40
3.11	Magnetic components	Assorted	30
3.12	DG Set and UPS, Facility management system	1 Set	100
3.13	Electric Fence	4.5 kms.	100
4	Electronics / Controllers		
4.1	Isotope Ratio Mass Spectrometer , Area Radiation Monitors (ARM), Electrometer for ARM	Assorted	450
4.2	Thermal conductivity measurement, He leak detectors, Ultra Sonic Flaw detector	Assorted	60
4.3	Vector network analyser (VNA), Digital delay generator & Function generator, Oscilloscopes, Guass Meter, Test and Measuring instruments	Assorted	100
4.4	SNSPD (superconducting nanowire single-photon detector)	1 Set	350
4.5	Electronic components, RF components, S-band klystron with accessories	Assorted	500
4.6	Acousto-optic Modulators, Electro-Optic Phase modulators	Assorted	65
4.7	Function generators and Signal generator	2 Nos	20
4.8	High sensitivity EMCCD Camera, CCD camera, Detectors (APDs, photodiodes, PMTs, X-ray, SDD), Streak camera electronics	Assorted	400
4.9	Industrial controllers, PXI add on cards, USB/Ethernet DAQ systems, Motion controllers, encoders, motors, opto-mechanical components, Data loggers, network and protocol converters, Network components,	Assorted	500
4.10	Liquid Jet polishing Machine (0.5 m)	1 Set	185
4.11	Ion beam Figuring system (0.5 m)	1 Set	1080
4.12	Dry ice optics cleaning station	1 Set	150
4.13	Laser diode driver (CW) & with temperature controller, AO/EO Q-switch driver	1 Set	45
4.14	Laser Trackers	1 Set	220
4.15	UHV Gauge (BAG) Controllers & Cables	Assorted	50
4.16	Femto Ampere Source, low current measurement system & Calibration system	Assorted	50
4.17	Radiation Resistant Residual Gas Analysers	Assorted	50
4.18	Digital BPM processing electronics	Lot	300
4.19	Processing electronics of Bunch By Bunch feedback system	Lot	150
4.20	Annual maintenance Contracts (AMCs) for Work stations, PCs, Servers, LFDs, Undulator control system, UPS, Photocopier, Fire Alarm System (FAS), Electrical Distribution system, Public Address System, Laser Tracker (Absolute tracker), CMM, CCTV system Old and new and LCW plant instrumentation	Jobs	111
4.21	Substation automation, protection system and miscellaneous	Assorted	35
4.22	SEM with EDAX and accessories	Assorted	150

4.23	Portable XRD based Stress measurement system for tubes/joints (ID Stress measurements) FE	1 Set	250
4.24	Small vacuum furnace for brazing	2 Set	100
4.25	Sensors for SQUID Magnetometer and power supply	Assorted	70
4.26	Accessories, Spares and consumables for Diffractometers, PPMS	Assorted	170
4.27	Test, measurement and control instruments	Assorted	85
5	IT equipments / Software		
5.1	PCs, Data acquisition system, Servers and Communication systems: Data Storage Servers, web servers, network points, network switch, Firewall, RFID system	Assorted	150
5.2	Embedded Software development tools	Assorted	50
5.3	Servers, firewall, network switches, tape library, LFDs, NAS, PCs, Server components: HDDs, memory modules	Assorted	100
5.4	Software license and update packs for Operating System, network security, NMS, IDS/IPS, antivirus, data backup solutions, Database management system, SCADA system, and miscellaneous software tools & applications, Design and drafting software, process control and report generation software, design plotters and consumables, design workstations; printers;	Assorted	200
5.5	OFC Cables, Passive Network components	Lot	25
6	Machine		
6.1	Hydrogen Furnace	1 Set	200
6.2	Table-top XRF system	1 Set	50
6.3	LCW pumps, heat exchangers, cooling towers, de-ionized water treatment plants, tools and tackle and consumables, pipes and fittings, pump motors and other spares for chillers and precision cooling systems, Spares like Control valves, Electrically actuated valves NRVs, Butterfly valves etc., tools, tackles and consumables	Assorted	110
6.4	Annual maintenance Contracts (AMCs) for Air cooled chillers, Water cooled chillers, Compressors, Air dryers, Air Washer units, turnstile gates, water treatment plant, LCW Plants (Indus 1 & 2), DG set of Indus complex, Electric Vehicles (EVs) etc.	Jobs	124
6.5	Pressure cell for MPMS-3 SQUID VSM (Quantum Design)	1 set	20
6.6	Pump-probe laser based scanning confocal microscopy system and repairs	Assorted	400
6.7	HRXRD system	1 Set	500
6.8	Surface profiler, Fiber Recoater	Assorted	100
6.9	Spin photonic measurement system	1 Set	400
6.10	Equipment for Diffusion bonding, supersonic particle deposition, WAAM wire arc additive manufacturing and Activated TIG Facility	Assorted	300
6.11	Procurement and installation of different arc welding machines and automation, Fiber laser welding	Assorted	200
6.12	Gas mixing, purification, analysis and QC system	Assorted	30
6.13	Microscopy Cryostat with magnetic-field dependent Raman scattering	1 set	300
7	Materials		
7.1	Iridium/ platinum lab-wares and crucibles, High purity copper, pure elements substrates, targets and metallurgical consumables	Assorted	120
7.2	Wire bonder , Bonder for attaching die to package	Assorted	40
7.3	Chemicals and gases	Lot	83
7.4	Energy Storage capacitors	80 Nos	50
7.5	HV transformers and Inductors	25 sets	25
7.6	Fumed nano-silica suspension	Lot	35
7.7	Tin laps	Lot	35
7.8	Cerium oxide polishing compound, Aluminum oxide polishing compound and other electropolishing consumables	Lot	90
7.9	Invar components, SMAs, gaskets, Ferrite cores, Machine tools, misc. items of hydraulic circuits and components of actuation system, Spares of alignment instruments and accessories,	Assorted	60
7.10	Procurement of raw materials (austenitic stainless steel/ aluminum , carbon steel knife edge flanges/ blanks, copper) etc.	Lot	100
7.11	Procurement of welding/ brazing alloys, welding/ brazing accessories, fine metal powders and other consumables etc.	Assorted	40

7.12	Procurement of general purpose tools, cutting tools, coolant, lubricants, oil, paint and chemicals.	Assorted	20
7.13	Superconducting magnet fabrication	Job	50
8	Measuring instrument		
8.1	Conventional measuring instruments- granite V-block, flatness instruments, coincidence level gauge, linear calibration setup, Internal thread profile measuring instruments	Assorted	80
8.2	Procurement and installation of vision based CMM and submicron CMM)	1 Set	300
8.3	Equipment for NDT testing along with probes and accessories	Assorted	45
8.4	High Magnetic field impedance measurement set up	1 Setq	250
9	Mechanical equipments		
9.1	Hot Isostatic Pressing System	1 Set	1200
9.2	Xenon lamp based optical floating zone	1 Set	750
9.3	Optical Table, Opto mechanical components, movement mechanism / encoders / fiber components / galvo scanner	Assorted	160
9.4	Gamma radiation source with activity of 2000-5000 Ci	1 Set	50
9.5	0.5 m diameter 5 axis Aspheric Polisher	1 Set	750
9.6	DUV Optics Cleaner	1 Set	155
9.7	Synchrotron beamline optics Test bench	1 Set	200
9.8	Air bearing components	Assorted	350
9.9	DI plant, High temp. vaccum furnace, High temp. substrate rotation, Chillers, Vibration isolation tables, vacuum pumps, ultra-sonic / mega sonic cleaning, Valves, Laboratory glassware washer, etc	1 Set	75
9.10	Opto-mechanical mounts	50 Nos	200
9.11	5 T EOT Crane, Material handling/movement system, vehicle and accessories	Assorted	40
9.12	Ultrasonic peening system and accessories	1 Set	50
9.13	Complete conveyor with its PLC control, process control software, product tracking software, sensors	1 Set	500
9.14	Tuner for HB650 Cavity	1 Set	180
9.15	X-ray Monochromator system	1 Set	350
9.16	Soft X-ray emission Spectrometer	1 Set	450
9.17	Refurbishment of Large Furnace	Job	600
10	Optics and Optics Equipments		
10.1	BBO crystal module for Spontaneous down conversion	2 Sets	30
10.2	Optics (Dichroic mirror, Lens, Waveplates, PBS, beamsplitter, achromatic doublet, filters, etc.), Illumination Optics for Machine vision	Assorted	150
10.3	Optical Fibers and Fiber delivery systems (Fiber port cluster), Optical Fiber and Optical components for Raman Sensor and fiber gratings, Low power and high power Fiber optic components in single clad/double clad/ large mode area fibers, Gain fibers Yb, Tm/Ho, Er doped, Passive optical fibers	Assorted	300
10.4	Zerodur blanks, Fused Silica blanks, Silicon substrates	Lot	750
10.5	High power laser diode bar (CW), QCW & fiber coupled laser diodes, LD arrays/stacks, seed laser diodes (CW & pulsed)	Lot	175
10.6	Non-linear crystals / Harmonic converter, SHG Crystals, Nd:YAG rods, Yb:YAG disks, Laser rods and disks, PPLN crystals	Assorted	100
10.7	Bulk unpolarized and polarization optics, Nonlinear crystals, Acousto optic modulators with controllers for fiber laser, miscellaneous opto-mechanical components	Lot	120
10.8	PW optics Components	Assorted	200
10.9	150 TW optics Components	Assorted	100
10.10	Lasers (Raman Spectroscopy)	2 Set	50
10.11	Digital CCD Cameras	10 Nos	25
10.12	Thermoluminescence and OSL set up	1 Set	50
10.13	Spectrograph with cooled CCD	1 Set	50
10.14	Optomechanical components (Translation stages, mounts, shutter, chopper, pinhole, alignment tools, etc.)	Assorted	35
10.15	Digital microscope with image processing software	1 Set	50
10.16	Fiber Interrogator, Optical spectrum analyzer, ASE Source and broadband tunable Sources	Assorted	190
10.17	Lasers for ROFDTs and DAS	2 Set	30

10.18	Flash lamps	Assorted	35
10.19	Optical components, Auto-correlators, Mirrors, Gratings, Optical glass, packaging / bonding of photodetectors, Fiber gain module, EO Q-switch, Laser diodes (200-266 nm, UV), single transverse and longitudinal mode laser (1064 nm, 532 & 351 nm), Fiber seed laser, Laser lithography (1 µm), diode laser source for PCI, cavity ringdown and scatterometer, Femto second oscillator, diode pump gain module	Assorted	150
10.20	Fiber coupled laser diodes for fiber laser, Narrow spectral width, broad band, nanosecond, picosecond seed sources, Cooling platforms, Photodetectors, phase mask, fiber for LIBS, software, data acq. Card	Assorted	70
10.21	Calibration unit, characterization setup for photodetectors	1 Set	50
10.22	Echelle Spectrometer with ICCD	1 Set	125
10.23	Optical instruments (scratch dig system, Fizeau Interferometer, Spectrophotometer, Ellipsometer, spectral response setup), Wavelength meter, OSA, beam profiler based on Rayleigh scattering	Assorted	45
10.24	Double pulse laser system for LIBS	1 Set	55
10.25	Installation of Angular optics for laser interferometry and calibration	Job	30
11	Vacuum / UHV related		
11.1	Helium Leak Detector	1 Set	20
11.2	Residual Gas Analyser	1 Set	30
11.3	Vacuum Components (Gauges, getters, chamber, viewports, gate Valves, Flanges, Gaskets)	Assorted	30
11.4	Plasma-enhanced chemical vapor deposition (PECVD) system	1 Set	500
11.5	Fabrication of UHV Chambers & associated components	Job	125
11.6	UHV Chamber supports, Ceramic UHV Chambers, Non-Evaporable Getter (NEG) Modules, Photon Absorbers, RF-Shielded Bellows, Bake-out Heaters & accessories, Taper chambers, NEG coated chambers, Collimator and Fixed masks, WCS mechanism, Safety shutter mechanism, UHV view port, SS flexible tubes/hose, Beam viewer system, etc , TMP, Sputter Ion Pump and Titanium Sublimation Pump (TSP) Controllers & Cables	Assorted	500
11.7	Nano positioner (XY manipulator)	1 Set	40
12	Others		
12.1	Facility infrastructure (Electron beam processing plant, accelerator vault, linac tuning and assembly facility, facility washing system, Preliminary fire-fighting system, Fire Alarm System, Material lifts, Truck docking station, Embedded pieces, Air conditioners), air handling and ozone removal	1 Set	1400
12.2	25 MW peak power klystron assembly	1 Set	500
12.3	Undulator development	Job	300
12.4	High power microwave components	Assorted	150
12.5	Clean room Lab, Clean Room Equipment and Consumables	Job	1200
12.6	Sputter and Ion sources, e-beam control system and DIBSD etc	Assorted	125
12.7	EPR Dosimetry equipment, HPLC system, real-time dosimetry devices, HPGe, low level activity detection instruments and setup, Sodium Iodide detectors, cold facility, shielded containers, Laboratory equipment, Dosimetry systems and consumables, real-time dosimetry devices, process coolers, continued operation of existing systems.	Assorted	180
12.8	Outsourcing of : A) Technical activities including designs, precision assemblies, engineering, testing, installation, facility and lab operations, intermediate maintenance and laboratory activities. B) Office operations, housekeeping, using scientific procedures	Job	150
12.9	Real time Dose measurement set up, stages and controller	Assorted	100