

SCHEDULE OF WORK- BSL3 Lab

S.No	Description	Unit	Qty	Rate (Rs)	Amount (Rs)	Make List
1	Structural construction work as required for dismantling of lab and Existing Autoclave and establishing the BSL 3 lab facility. Comprising of dismantling of existing internal walling, ceiling, glass partitions, re-structurung of civil structure, repairing and re construction of existing floor finish level and necessary brick-plaster walling including HVAC and Electrical installations foundation at Roof top.	Set	1			Bluestar
2	Air cooled Condensing Unit - 11 TR complete with accessories and FDN	Set	1			Bluestar
2A	Refrigerant Copper Piping system including necessary valves & fittings including thermal Insulation	Set	1			
2B Air Handling Units						
2.1	Modular Outdoor type Double skin Air Handling Units of 43+/-2 mm thick PUF injected panels with 24 gauge GI inner skin and pre-coated GI outer skin all as per specification including fan with TEFC motor. AHU shall have Air intake louver combined with pre filter (EU-3), Fine Filter section (EU-9), coil section with CHW 8 Row coil, blower section with DIDW centrifugal fan having static pressure of 140 mm/Wg - With TWIN MOTOR ARRGT.					
2.2	AHU - 1 : Once Thru AHU with supply air quantity 5500 cfm at 140 mmWG Static pressure (TWIN MOTOR)	No	1			Flakt/Edgetech/Citizen
3 Exhaust Air Filtration System						
3.1	Modular Double skin Exhaust air EAU , with 25+/-2 mm thick PUF injected panels with 24 gauge GI inner skin and pre-coated GI outer skin all as per specification including fan with TEFC motor. EXU shall have extruded aluminium construction, gear operated volume control damper at Air Inlet and outlet, with Micro Vee filter (EU-9), HEPA (EU-13) filter section flange type with HEPA filters,Cap=7000 CFM, With TWIN MOTOR ARRGT	Set	1			Flakt/Edgetech/Citizen
3.2	LAF / BSC Exhaust air On-line Centrifugal SISW Fan cap. 2500 cfm/80 mm static with direct driven motor and vibration isolation mounting suitable for 2 Nos BSC of size 4 Ft. Class-II/B-2	No	1			Humidine / Nicotra
3.3	NSF Approved Biosafety cabinet (BSC-4FT) of Type II , B2,100% Exhaust including necessary exhaust system comprising of inline exhaust fan of suitable capacity and static pressure complete with pvc /frp circular ducting , the cabinet should be supplied and installed with SS Stand and caster wheel	No.	2			Esco/Labconco
4.0 Air Distribution System						
4.1	GI Ducting complete with MS painted flanges, all joints sealed with RTD silicon sealant with MS painted supports as per IS-266 with Zinc deposition 120gms/sqm.					
4.2	GSS-24 Swg ducting including accessories and Support arrangement	Sqmt.	150			Tata/Jindal/Sail
4.3	GSS-22 Swg ducting including accessories and Support arrangement	Sqmt.	75			Tata/Jindal/Sail
4.4	Aluminium Gear Operated volume control dampers for AHU, ducting and exhaust fans	Sqmt.	2.5			Carrier/Continental
4.5	Duct Insulation with 19 mm thick aluminium foil faced ARMAFLEX and all joints shall be provided with 2" aluminium tape.	Sqmt.	225			Armaflex/Vidoflex
4.7	Fuseable link type UL 99 rated Fire dampers at AHUs & EAUs (Supply air and Exhaust air unit)	No	4			Carrier/Continental/Waves
4.8	Extruded aluminium powder coated Supply/ Exhaust Air Diffusers with Black Matt Finish VCD	Sqmt.	3			Carrier/Continental/Waves
Sub Total for HVAC Section:					-	

S.No	Description	Unit	Qty	Rate (Rs)	Amount (Rs)	Make List
5.0	Electricals					
5.1	M C C Panel - Main Electrical Panel, IP-55, comprising of - MCCB, DOL Starter, Digital Volt meters, indication lamps and VFD enclosure with ventilation fan and protection MCCB etc.	No	1			ISI
5.2	Electrical power Cabling 1.1 KV grade PVC/ XLPE insulated aluminium/ copper conductor armoured/ Unarmoured cables on cable tray.(Copper / Aluminium armoured / Flexible cables), control cables (copper), (for plug points and Poewr Sockets) - Power cabling from Main MCC to BSL 3 lab distribution system and HVAC equipment termination considered.	Lot	1			Finolex/Polycab/National
5.3	Variable Frequency Drive (VFD) ACS 510/550 with IP 55 protection and enclosure & Exhaust air ventilation fan - ABB	Set	4			ABB
5.4	Supplying all the fitting materials, cutting, peeling, terminating and connecting cable with cable gland and crimped aluminium lugs in respective Feeders, Equipment's	Job	1			
6	Power sockets & Lighting arrangement					
6.1	Cleanroom Light fixtures : BSL lab compatible, 'O' leak, fitted with 5 mm Thk Toughened Glass, 2 x 36 watts CFL top opening type with electronic ballast with; Housing : CRCA powder coated frame-less Lens: To provide Toughened glass with 3 M adhesive tape (to be fixed inside the opening provided in 60 mm ceiling) Reflector : Preanodized imported aluminium Ballast : Philips electronic with pf>0.98 & THD < 10 %	Nos	15			Optico/Superlite/Equv.
Sub Total for selective Electrical Section:						-
7	BSL 3 lab interior & clean room					
7.1	Double skin Clean room Wall Cladding, Wall Partition Panel system 80 mm thick , PUF infilled powder coated GI sheet, as per specification complete with concealed conduits for power socket, data, telephone points and necessary cut-outs for double glazed view panels and doors	m2	124			GMP/Fabtech/Equv.
7.2	Double skin powder coated GI sheet, PUF infilled, Walkable Clean room Ceiling system 50 mm thick , including necessary utility cut-outs duly concealed, as per specification , including necessary utility cut-outs duly concealed, as per specification	m2	40			GMP/Fabtech/Equv.
7.3	Polyvinyl Wonderfloor , Royal flooring made from polyvinyl chloride (PVC or Vinyl) 2 mm Thk. All joints fusion welded (Roll sections should be used in-place of tile for lesser joints)	m2	40			Deco/Wonderfloor / RMG
7.4	R-45 PVC progressive floor to wall coving suitable for Vinyl floor finish	RMT	50			Wonderfloor / RMG
7.5	Wall to ceiling and Wall to wall coving with Extruded aluminium powder coated (R= 42) clutch-coving with silicon finish	RMT	55			Fabtech/Cleanroom Systems/Equv.
7.6	Zone seperation glass aluminium heavy duty partition door at the entrance of the main door with suitable size.	NO	1			
8	Clean room compatible Double Leaf Doors 1500 (W) x 2100mm (H) as per specification with door closure, SS-'D' handle, Push plate and kick plate along with 480x750 double glazing view pane & Drop-seal	Nos	1			Fabtech/Cleanroom Systems/Equv.
8.1	Clean room compatible Double Leaf Doors 1200 (W) x 2100mm (H) as per specification with door closure, SS-'D' handle, Push plate and kick plate along with 480x750 double glazing view pane & Drop-seal	Nos	5			Fabtech/Cleanroom Systems/Equv.
9	EMERGENCY 900 (W) x 2100mm (H) as per specification with SS-'D' handle, PANIC-BAR along with 480x750 double glazing view pane & Drop-seal	Nos	1			Fabtech/Cleanroom Systems/Equv.
10	Double glazing windows with 5 mm thk toughened glass fitted (900x1000), as per approved drawings.	Nos	3			Fabtech/Cleanroom Systems/Equv.
11	SS-Static Pass Box of size 600x600 opening space 450x450 complete with PLC, UV lamp with Hour meter and double door interlocking arrangement with specified time delay mechanism.	SET	1			Fabtech/Cleanroom Systems/Equv.
Sub Total for Lab Interior Section:						-

ICGEB, Delhi:
Cell Culture BSL-III Lab facilities.

S.No	Description	Unit	Qty	Rate (Rs)	Amount (Rs)	Make List
12	Automation & Access Control system					
12.1	Programmable Logic Controller , View port operator Terminal					
12.2	DDC panel Enclosure Powder coated wall type with Transformer, MCB & terminal block	Set	1			Alarton/Honeywell/Delta
12.3	Duct mounted Air velocity sensor					
12.4	Exhaust duct Temperature sensors					
13	Access control & 2 - Door Interlock system with Electromagnetic Strike lock unit + Egress Button and 10 nos Access Proximity cards	Set	1			Alarton/Honeywell
14	Magnehelic Pressure Gauge unit at Entry door	Set	2			Alarton/Honeywell
15	FIRE Control Address System & Communication cabling with termination.	Job	1			Finolox/National
16	CCTV Surveillance System	job	2			HIKVISION
17	Supply , Installation and commissioning of EatonMake 20 KVA Online UPS with half an hour backup with main power incomer cable and also with power distribution board.	Job	1			EATON
18	On-site Comprehensive Operation and Maintenance of the duly validated BSL-3 lab facility for next 12 months	Lot	1			
19	MS Rustproof painted structural staircase with minimum 900mm suitable for approaching rooftop plantroom area with handrailing					
20	Necessary General Civil & Structural Up-gradation work suit to site requirements for completion of the project	Lot	1			
Sub Total for Automation Section:					-	
21	CYLINDRICAL AUTOCLAVE CAPACITY 80-100LTS	job	1			NAT-STEEL
22	Bsl 3 lab Testing, Validation & SOP					
22.1	Validation, Testing and Documentation of BSL 3 Lab Facility	Lot	1			
22.2	Operation manual (SOP)	Set	1			
Validation & Testing Total:					-	
Grand Total:					-	
NOTE: TAXES SHALL BE CHARGED EXTRA AT ACTUALS.						