

AVIATION COMPLEX AT BLUE AREA, ISLAMABAD

BILL NO. 8: INTEGRATED BUILDING MANAGEMENT SYSTEM (IBMS)

BILL OF QUANTITIES

Item No.	Item Description	Unit	Qty	Unit Rate (Rs.)	Total Amount (Rs.)
(i)	(ii)	(iii)	(iv)	(v)	(vi)
	IBMS Works Ref Specs: 9300				
IBMS-01	Controls for HVAC Central Plant Room Supply, Installation, Testing and Commissioning of Automatic Controls for HVAC Plant Room Equipment including Electric Chillers (4nos.), 2-Cell Cooling Towers (4nos.), Chilled Water Primary Pumps (4nos.), Chilled Water Secondary Pumps (10nos.), Condenser Water Pumps (4nos.), and Hot Water Generators (2nos.), Oil Lift Pumps (02 Nos), HWG Flue Gas Exhaust fan (01 No.), Including all field devices/Sensors (Temperature Sensors, Humidity Sensors, Differential Pressure Switches, Pressure Sensors, Current Transducers, Flow Switches etc.), 05 Nos. Water Flow Meters (08 inch line size), DDC Controllers, Pre-wired Control Panels with Transformers, Control/Data Cabling along with all required Accessories and complete in all respects, in accordance with Tender Specifications & Drawings. Supply, Installation, Testing and Commissioning of 08 Nos. 2-way Control Valves with Actuators for Cooling Towers (12 inch line size). Supply, Installation, Testing and Commissioning of 08 Nos. 2-way Control Valves with Actuators for Chillers (12 inch Condenser Water Line size and 10 inch Chilled Water Line). Complete integration of Chillers, Hot Water Generators, Water Flow Meters and VFDs with BMS through Communication Interfaces including any Gateway/Controller required for interfacing on BACNet/IP.	Job	1		
IBMS-02	Controls for Air Handling Units (99 Nos.) Supply, installation, testing and commissioning of Controls for AHUs, including Humidity Sensors, Duct Temperature Sensors, Immersion Temperature Sensors, Differential Pressure Switches, Modulating Damper Actuators, Duct-type CO2 Sensors, Duct-type Smoke Detectors, DDC Controllers, Pre-wired Control Panel with Transformer, Control/Data Cabling along with all required Accessories and complete in all respects, in accordance with Tender Specifications & Drawings. Supply, Installation, Testing and Commissioning of 2-way modulating Control Valves of AHUs having chilled water line sizes of 3 inch for 01 AHU, 2.5 inch for 01 AHU and 2 inch for 97 AHUs.	Job	1		
IBMS-03	Controls for Basement Parking Ventilation System (66 Nos. Fans) Supply, installation, testing and commissioning of Controls for Parking Ventilation System (consisting of 06 Nos. Supply Fans, 06 Nos. Exhaust Fans and 54 Nos. Jet Fans) including all required field devices/ Sensors (CO Sensors, Differential Pressure Switches etc.), DDC Controllers, Pre-wired Control Panel with Transformers, along with all required Accessories and complete in all respects, in accordance with Tender Specifications & Drawings and Project's Requirements.	Job	1		
IBMS-04	Controls for Pressurization fans of Emergency Staircases (02 Nos. Fans located at Rooftop) Supply, installation, testing and commissioning of Controls for Pressurization of Emergency Staircases (02 Nos.) including all field devices/ Sensors (Differential Pressure Switches, Pressure Sensors etc.), DDC Controllers, Pre-wired Control Panel with Transformer, along with all required Accessories and complete in all respects, in accordance with Tender Specifications & Drawings. as specified and in accordance with Project's Requirements	Job	1		
IBMS-05	Integration of FCUs (266 Nos.) Integration of FCUs for status & parameter monitoring (On/Off), complete in all respects, including control/data cabling in accordance with Tender Specifications and Drawings. Control Valves and Thermostats/Controllers shall be provided by FCU Supplier.	Job	1		

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IBMS-06	Integration of Elevators (18 Nos.) Protocol level integration with BMS through Elevator Controller/Communication Interface (Controller/Communication Interface will be provided by Elevator supplier), complete in all respects and in accordance with Tender Specifications and Drawings	Job	1		
IBMS-07	Integration of Escalators (10 Nos.) Protocol level integration with BMS through Escalator Controller/Communication Interface (Controller/Communication Interface will be provided by Elevator supplier), complete in all respects and in accordance with Tender Specifications and Drawings	Job	1		
IBMS-08	Integration of Fire Alarm System (FAS) Protocol level integration with BMS through Main Fire Alarm Control Panel (Communication Interface will be provided by FACP Supplier), complete in all respects and in accordance with Tender Specifications and Drawings	Job	1		
IBMS-09	Integration of Firefighting Pumps (02 Nos. Pump Sets) Protocol level integration with BMS through Firefighting Pumps Controller (Communication Interface will be provided by Fire Fighting Pump supplier), complete in all respects and in accordance with Tender Specifications and Drawings	Job	1		
IBMS-10	Integration of Water Supply, Booster & Drainage System (14 Nos. Pumps) Protocol level integration of Water Supply System with IBMS. (Communication Interface/module will be provided by Pump supplier), complete in all respects and in accordance with Tender Specifications and Drawings	Job	1		
IBMS-11	Integration of Diesel Generators (07 Nos.) Protocol level integration with BMS through Generator's Controller/Communication Interface (Communication Interface will be provided by Generator supplier), complete in all respects and in accordance with Tender Specifications and Drawings	Job	1		
IBMS-12	Integration of Energy Monitoring System Server level integration of Energy Monitoring System with BMS through standard communication protocols, complete in all respects and in accordance with Tender Specifications and Drawings	Job	1		
IBMS-13	Integration of Access Control System Server level integration of Access Control System with BMS through standard communication protocols, complete in all respects and in accordance with Tender Specifications and Drawings	Job	1		
IBMS-14	Integration of Surveillance System Server level integration of Surveillance with BMS through standard communication protocols, complete in all respects and in accordance with Tender Specifications and Drawings	Job	1		
IBMS-15	IBMS Computer Supply and installation of BMS Computer as specified in Tender Documents, complete with licensed Windows 11 Professional or better OS, Mouse and Keyboard, 27" LED Monitors (04 Nos.), Color Printer Size A3, BMS Software with license for upto atleast 05 concurrent users, Master Controller/Automation Server (if required) and UPS of 1.0 kVA rating.	Job	1		

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Item No.	Item Description	Unit	Qty	Unit Rate (Rs.)	Total Amount (Rs.)
IBMS-16	UPS and Power Cabling Supply, installation, testing and commissioning of UPS system and associated power supply system including cabling/conduiting and accessories for BMS Computer and associated LED Screens (04 Nos.), all LAN switches, all DDCs, all Gateways and Master Controller(s) etc., as specified in Tender Documents & Drawings, complete in all respects. UPS sizing shall be ensure at least One (01) hour backup to all connected equipment.	Job	1		
IBMS-17	LAN Equipment for BMS (Approx. LAN Nodes: 160) Supply, installation, testing and commissioning of LAN equipment including Network Switches, Data Cabinets, Patch Panels, Patch Cords, Back Boxes with Face Plates and I/Os etc. complete in all respects, in accordance with Tender Specifications & Drawings, complete in all respects.	Job	1		
IBMS-18	Control and Communication Cabling Supply & installation of communication/Data cables including cable laying and termination, conduiting & ducting etc. complete in all respects in accordance with Tender Specifications & Drawings.	Job	1		
IBMS-19	Supply & installation of control cables including laying, termination, conduiting & ducting etc. complete in all respects in accordance with Tender Specifications & Drawings.	Job	1		
IBMS-20	Testing & Commissioning - Building Management System (BMS) Testing & Commissioning of complete Building Management System (BMS) including integration and interfacing with all systems as per Technical Specifications & Drawings.	Job	1		
				Total Amount (Rs.) = _____	