## FORM F: Price Schedule Form

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| Name of Bidder: | [Insert Name of Bidder] | Date: | Select date |
| ITB reference: | ITB/LBY/SFL/2018/087 | | |

**Rehabilitation of Tripoli Central Hospital in Tripoli, LIBYA**

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| **Item** | **Description** | **Unit** | **Qty** | **Unit Rate** | **Amount in USD** |
|  | **Civil Works:** |  |  |  |  |
|  | **A - Demolishing, dismantling and preparatory works:** |  |  |  |  |
|  | Demolishing and preparing works include the following:  a. Removing the demolished material off site to authorized dumping sites. b. The dismantled materials are the sole property of the client. The contractor shall collect and hand over such material incase required by the Client. c. The contractor shall coordinate implementation of his daily work activities, working hours, throughout the construction period with the client and the supervising engineer for smooth implementation of the work and to avoid interruption of the functioning building. d. The contractor shall protect and safe guard the existing facilities and building finishes. e. The contractor shall make the necessary temporary water, electrical power connections. etc.. to prevent interruption of the power and water supply for the existing functioning building. f. The contractor shall take all necessary measures to ensure safety of his labor and the existing structures, finishes, utilities, services..etc. and to minimize environmental hazards including pollution, noise and dust. | Note |  |  |  |
| A1 | Clearing the site and the working areas form any surplus, debris, utilities, fixtures, pipes, and all other unwanted material rendered in the existing building, and preparing the surfaces ready to start the required rehabilitation works, complete; all in accordance with the Engineer's instructions. | Lump Sum | 1 |  |  |
|  | **B-Block works** |  |  |  |  |
|  | Block work shall include supplying all required material and workmanship to build new walls or repair the damaged block work and restore the wall safe to the original aesthetic status. The work shall include removing of loose damaged block work, filling holes, stitching cracked walls, retrofitting masonry reinforcement, reconnecting parting walls with straps, ties, filling and sealing cracks in the walls, repainting of defective mortar joints. The works shall be carried out in accordance with specifications and the Engineer's instructions. | Note |  |  |  |
| B1 | Supply & build Grade 35 hollow concrete blocks, size 40x20x20cm built with cement sand mortar (1:4) mix according to technical specification and instruction of Engineer. | SQ.M | 50 |  |  |
|  | C-Plastering and patching plastering |  |  |  |  |
|  | Plastering and patching plaster work shall include supplying all required material and workmanship for plastering works to restore the damaged plastered surfaces sound to the original aesthetic status and match the existing textures. The work shall include removing of loose damaged plastering, filling holes, stitching cracked plaster, filling and sealing cracks in the plastered walls, repainting of defective mortar joints, filling around embedded utilities and pipes,..etc. The works shall be carried out in accordance with specifications and the Engineer's instructions. Cement mortar mix shall be in accordance with ASTM C926. | Note |  |  |  |
| C1 | Supply and make internal plastering 25 mm thick for walls and ceiling with cement sand mortar (1:3) mix made of 440 Kg cement + 1 M3 sand. The work includes rough 15 mm primer rendering, finishing coat 10 mm and metal mesh at concrete block work joints, edges and openings. | SQ.M | 150 |  |  |
|  | **D - Painting and patch painting:** |  |  |  |  |
|  | The work shall include and comply with the following: -Painting material should be of high quality approved product.  -Surface preparation including repairing and peeling off of the damaged or flaked paints, scraping a way any loose paint, applying spackling compound, priming, sanding and all necessary preparatory works to start the new painting.  -Painting pattern, finishing and color shall match the existing textures and in accordance with the Engineer's instructions. | Note |  |  |  |
| D1 | Supply & apply minimum 2 coats of colored emulsion paint (Supercryle) of high quality approved product, on the existing internal walls and ceilings. The work shall also include removing the damaged of flocking paint, cleaning, surface preparation, applying putty as needed, primer, under coats, and all required works and as directed and approved by the Engineer. | SQ.M | 2,700 |  |  |
| D2 | Painting of existing doors and windows with one under coat, primer and minimum 2 coats of high quality wood oil paint . The work shall also include removing the damaged of flocking paint, cleaning, surface preparation, applying putty as needed, primer, under coats, and all required works and as directed and approved by the Engineer. | SQ.M | 500 |  |  |
| D3 | Supply & apply minimum 2 coats of anti bacteria emulsion paint, of high quality approved product, on the existing internal walls. The work shall also include removing the damaged of flocking paint, cleaning, surface preparation, applying putty as needed, primer, under coats, and all required works and as directed and approved by the Engineer. | SQ.M | 700 |  |  |
| E | **E- Tiling and Marble Works** |  |  |  |  |
|  | Tiling works shall include supplying all required material and workmanship for tiling works to restore the damaged tiles the original aesthetic status and match the existing tiling work. The work shall include removing of loose damaged tiles, filling below tiles, repainting of defective mortar joints, grouting and polishing. The works shall be carried out in accordance with specifications and the Engineer's instructions. | Note |  |  |  |
| E1 | Supply and install none slipping ceramic (grade A) size 330mm x 330mm x 8mm thick for toilet floors, similar to the existing, laid on 30mm mortar bed, including all required works according to specifications and Engineer instructions. | SQ.M | 150 |  |  |
| E2 | Supply and install white marble (grade A), 30mm thick and 300 mm width for windows and doors sills laid on 20mm thick mortar bed, including all required works. | SQ.M | 100 |  |  |
| E3 | Supply and install 1 mm thick hygiene anti-static vinyl sheets for wall covering, similar to *gerflor* or equally approved, for the existing operation rooms. The work price shall also include supply and installation of gypsum boards for the walls which will be be cladded by the vinyl wall sheets . The vinyl sheets shall comply ISO 22196 and product specification EN 15 102 or with any relevant applicable Standards. | SQ.M | 600 |  |  |
| E4 | Supply and install 2 mm thick hygiene anti-static vinyl rolls for flooring with PVC cove formers, similar to *gerflor* or equally approved, for the existing operation rooms and intensive care unit and clean areas. The Static Electrical Propensity < 2 000; all in accordance with the relevant applicable Standards. | SQ.M | 700 |  |  |
| E5 | Supply and install 60\*60cm suspended ceiling for operating room, similar to ECOPHONE HYGIENE Type Protect "A" (non perforated) or equally approved. The price should include galvanized suspension system with anchors to the structure, bacterial resistant, moisture resistant, with standing relative humidity up to 95% at 30c fire resistant tiles, including access panels, fittings, fixing, installation of a closed cell gasket between the grid, retention clips to insure good seal, complete; all as specifications and the Engineer's instructions. | SQ.M | 800 |  |  |
| E6 | Supply and install suspended ceiling for bathroom, utilities and wet areas made from 30cm non perforated formed galvanized metal trays of 0.6mm thick and 45mm high in accordance with specifications and the related Standards. | SQ.M | 100 |  |  |
| E7 | Supply, install and test one layer of high quality waterproofing membrane SBS 4 mm thick on the existing roof. The price shall include removing the existing damaged water proofing layer, repair of damages and surface preparation. The water proofing membrane shall extend on the roof parapets at 50cm above roof surface. | SQ.M | 150 |  |  |
|  | **F - Carpentry and metal works:** |  |  |  |  |
| F1 | Supply and install high quality hygienic hinged two leaves steel doors of dimensions 150\*210 cm for the process room. The door shall have a fully-integrated system of door leaf, frame, hardware, automations and widow; all in accordance with the relevant applicable Standards. The contractor shall submit shop drawings for the door for the Engineer's approval | No | 4 |  |  |
| F2 | Supply and install high quality hygienic hinged two leaves PS doors of dimensions 160\*210 cm for the operation theater. The door shall have a fully-integrated system of door leaf, frame, hardware, automations; all in accordance with the relevant applicable Standards. The contractor shall submit shop drawings for the door for the Engineer's approval | No | 3 |  |  |
| F3 | Supply and install Pass Through Operating room Cabinet of high quality approved similar to CMP constructed from stainless steel, glass doors on operating room side and stainless steel doors on the Sterile Core side with approximate size 200\*100\*50 cm,  adjustable shelves,  electronic interlock system that prevents either door from moving when the opposing door is open to manitain the air quality in the operation room and prevent contamination | No | 2 |  |  |
| F4 | General: Maintenance, repair and adjusting the existing doors works shall include replacing the damaged/missed parts of the doors and windows, damaged/missed hardware and accessories such as hinges, cylinders, locks, handles, glass, caulking, watertight seals,etc. and adjusting the doors/windows to operate smoothly to the satisfaction of the Engineer. Unless otherwise stated all surface of wood doors & windows and shall be painted by two coats of wood preservative, two coats of primer, two coats of finishing paint, including surface preparation before the application of paint, removing the defective peeled paint, high quality of hardware and accessories, complete. The contractor shall submit shop drawings for the approval of the Engineer, prior to fabrication; all in accordance with specifications and the Engineer's instructions. | Note |  |  |  |
| F5 | Conduct maintenance, repair and adjusting the existing wooden doors, overall size 1000 X 2100 X 45 mm thick and with frame. | No | 25 |  |  |
| F6 | Conduct maintenance, repair and adjusting the existing wooden doors, size 2300 X 4000mm. | No | 2 |  |  |
| F7 | Conduct maintenance, repair and adjusting the existing wooden doors, size 1250 X 2100mm. | No | 8 |  |  |
| F8 | Conduct maintenance, repair and adjusting the existing PS doors, size 2700 X 3000mm. | No | 3 |  |  |
| F7 | Conduct maintenance, repair and adjusting the existing UPVC doors, size 900 X 1850 mm with frame. | No | 12 |  |  |
| F8 | Conduct maintenance, repair and adjusting the existing UPVC doors, size 900 X 1850 mm. | No | 8 |  |  |
| F9 | Conduct maintenance, repair and adjusting the existing windows, size 1700 X 2000 mm . | No | 5 |  |  |
| F10 | Ditto, but of size 1200 X 2000 mm . | No | 6 |  |  |
| F11 | Ditto, but of size 1500 X 1700 mm. | No | 15 |  |  |
| F12 | Ditto, but of size 1200 X 2000 mm . | No | 20 |  |  |
| **1** | **Total for Civil works ..carried to summary** |  |  |  |  |
| 2 | **Plumbing & Sanitary Works** |  |  |  |  |
| G1 | Supply and install Poly Propylene (PPR) pipes 1/2", for potable water network. | L.M | 100 |  |  |
| G2 | Supply and install Poly Propylene (PPR) pipes 3/4", for potable water network. | L.M | 150 |  |  |
| G3 | Supply and install Poly Propylene (PPR) pipes 1", for potable water supply. | L.M | 200 |  |  |
| G4 | Supply and fix white glazed fireclay European W.C. suite made of vitreous china to BS 3402 (grade A), complete with 10 liter double action flushing ceramic cistern, and fixed chromium plated tap 1/2” , including all water supply pipes 16mm, angle valves, UPVC drainage pipe connecting to the nearest manhole or sewage header and all related work accessories and fittings. | No | 12 |  |  |
| G5 | Supply and fix white glazed fire clay standing hand wash basin with overflow and single hole faucet, size 480 x 580 mm, made of vitreous china to BS 3402 (grade A), complete with all water supply pipes 16mm, chromium plated mixer and waste trap. The work include all related work accessories and fittings. | No | 12 |  |  |
| G6 | Supply and install top quality sanitary fixtures, such as Roca or equally approved, ceramic shower tray 120X120 cm, best quality water tap and water mixer, flushing hose, chrome plated stop valves, brass collectors and all other needed accessories to complete the work, all in accordance with the specification and Engineer approval. | No | 4 |  |  |
| G7 | Supply and install floor waste trap, size 150 X 150 mm, including chromium plated cover and all required works. | No | 12 |  |  |
| G8 | Supply and fix PPR valves of 1/2, 3/4 and 1" diameter and remove old ones, including all required works. | No | 15 |  |  |
| G9 | Supply and install UPVC pipes 1 1/2", for waste water network. The work include all tees, bends, and all related work accessories and fittings. | L.M | 80 |  |  |
| G10 | Supply and install UPVC pipes 3", for waste water network. The work include all tees, bends, and all related work accessories and fittings. | L.M | 70 |  |  |
| G11 | Supply and install UPVC pipes 4", for waste water network. The work include all tees, bends, and all related work accessories and fittings. | L.M | 45 |  |  |
| G12 | Supply and install UPVC pipes 5", for waste water network. The work include all tees, bends, and all related work accessories and fittings. | L.M | 65 |  |  |
| G13 | Supply and fix electrical water heater, 80 liters capacity, 0.8 Map pressure, provided with temperature gauges, including water supply pipes 16mm, chromium plated control valve, non-return valve and all required works. | No | 6 |  |  |
| G14 | Supply and fix 1' and 2 HP horizontal centrifugal pump, one flange and 50 HZ motor, installed on potable water main to supply the water tank. The work include all related work accessories and fittings. | No | 3 |  |  |
| G15 | Supply and install 2000 liters PVC tank for potable water, including the electrical floating valve and all related work accessories and fittings according to the specifications and the Engineer instructions. | No | 3 |  |  |
| G16 | Conduct general maintenance and repairing, connecting, testing, flushing and commissioning of the plumbing and sanitary systems rendered in the targeted department of the hospital. Bidders should visit the site to inspect the extend of damages in the exiting systems and consider such costs and expenses for the repair in their offers. Unless otherwise separately stated in the BoQ items, the repair shall include supplying of all required materials and workmanship, such as pipes, fittings, floor drain, clean out, water mixers, water taps, valves, excavation, breaching and digging in the walls and ceilings, connections to existing systems..etc , and all required repair works to restore the existing plumbing and sanitary and plumbing systems including hot and cold water systems and drainage system, fully functional as accepted by the Engineer and the relevant local authorities. Prior to the commencement of the rehabilitation works, the contractor shall collect all relevant information on the existing systems and submit shop drawings for the repair and obtain the Engineer's approvals. Rehabilitation works shall be carried out in coordination with beneficiaries and Engineer's instructions. All material used such as pipes, fittings and accessories shall confirm to BS 4514 and the relevant applicable Standards. | Lump Sum | 1 |  |  |
| **2** | **Total for Plumbing & Sanitary works ..carried to summary** |  |  |  |  |
| **3** | **H-Electrical Works** |  |  |  |  |
|  | General -The Contractor shall coordinate with the hospital administration and the maintenance team and the Engineer during the execution of the work to acquire all necessary basic information on the existing electrical system. - Prior to the commencement of the work, the contractor shall investigate the status of the existing electrical installations and provide the Engineer summary reports describing list of the repair works, and detailed implementation schedule and obtain the Engineer's prior approvals to commence the work activities -Price shall cover all associated civil such as making openings, performing necessary alteration in the existing walls or ceiling and connections to the existing systems. - Electrical works shall be compatible and integrated with the existing electrical system in accordance with the relevant applicable Standards Engineer's instructions.  -The contractor shall take all necessary measures to protect his works, ensure safety of the hospital occupancy and prevent interruption of the ongoing operation of the hospital through out the implementation of the rehabilitation works. -The contractor shall provide project closing documents such as-built drawings, catalogues, manuals and free training to the hospital maintenance team on maintenance and operation of the systems rendered in the building. | Note |  |  |  |
| H1 | Supply, install, test, commissioning a complete 16A single phase single socket outlet for power, socket outlets GEWISS, Bticino or equally approved. The work includes removal of the old ones and all the necessary to complete the work as per the Engineer's instructions. | No | 45 |  |  |
| H2 | Ditto, but single phase for light switch . | No | 45 |  |  |
| H3 | Supply and installation of copper wire PVC insulated, 600/1000V, similar to Prysmian , BALDASSARI or equally approved type. and the work includes all the necessary to complete the work as per the Engineer's instructions. |  |  |  |  |
| H3.1 | wire size 1.5 (mm²) | LM | 500 |  |  |
| H3.2 | wire size 2.5 (mm²) | LM | 500 |  |  |
| H3.3 | wire size 4 (mm²) | LM | 400 |  |  |
| H3.4 | wire size 6 (mm²) | LM | 200 |  |  |
| H4 | Supply and installation16A 2P CB circuit breaker type GEWISS, Bticino or equally approved, and the work includes all the necessary to complete the work as per the Engineer's instructions. | No | 50 |  |  |
| H5 | Ditto, but 25A 2P CB | No | 50 |  |  |
| H6 | Ditto, but 63A 2P CB | No | 30 |  |  |
| H7 | Supply,install,test,and commissioning 60×60 cm, 4×18 Watt T8 fluorescent recessed modular fitting carrier with plastic cover, including light lamps, wires, conduits, chock coils, starters, capacitors, clamps, bolts, Input Voltage AC 220V, 50HZ, Philips or equally approved type,and the work includes all the necessary to complete the work as per the Engineer's instructions. | No | 270 |  |  |
| H8 | Ditto, But wall mounted size 2×120 cm 2×32 Watt. | No | 20 |  |  |
| H9 | Supply,install,test,and commissioning 200 mm recessed waterproof round LED 20w, IP65, Luminous flux 1500 lm. of body Aluminum, Input Voltage AC 220V, 50HZ, *Philip w*hite croft lighting or equally approved type. The work includes all the necessary to complete the work as per the Engineer instructions. Note:- This light for toilets | No | 70 |  |  |
| H10 | Supply,install,test,and commissioning clean room hygiene LED, recessed luminaries with easy to clean surfaces,IP54,33 watt, Input voltage AC 220V, 50 Hz, screw connector, steel body and frame, overall dimension (595 x 595 mm) ,similar to Philips White croft Lighting or equally approved type. The work includes all the necessary to complete the work as per the Engineer's instructions. Note:- This light for operating theatres rooms | No | 40 |  |  |
| H11 | Supply and install high quality exhaust line fans for toilets. The work includes dismantling of old fans, new duct work, exhaust valves Ф15,out site grils,control panel, ,similar to VORTICE or equally approved and all the necessary to complete the work as per the Engineer's instructions Note:- Contractor shall design the new exhaust system and submit to them, to be approved by the Engineer before executing the work. | No | 8 |  |  |
| H12 | Conduct general repair, connecting, testing and commissioning of the whole damaged electrical installation rendered in the targeted department of the hospital. Bidders shall visit the site to inspect the extend of damages in the exiting systems and consider such cost and expenses for the repair of the system in their offers. Unless otherwise separately stated in the BoQ items, repair works shall include supplying of all required materials and workmanship such as cables, conduits, repair of the main service panel, wiring, circuit breakers, grounding system, connections to existing systems and all required repair works to restore the electrical installation fully functional as accepted by the Engineer and the relevant local authorities. | LS | 1 |  |  |
| **3** | **Total for Electrical works ..carried to summary** |  |  |  |  |
| I | **Mechanical Works** | | | | |
|  | **General:** -The Contractor shall coordinate with the hospital administration and the maintenance team and the Engineer during the execution of the work to acquire all necessary basic information on the existing mechanical system. - Prior to the commencement of the work, the contractor shall investigate the status of the existing mechanical installations and provide the Engineer summary reports describing list of the repair works, detailed implementation schedule and obtain the Engineer's prior approvals to commence the work activities -Price shall cover all associated civil works such as making openings for the mechanical installation, performing any necessary alteration in the existing walls or ceiling and connections to the existing systems -Mechanical installation shall be compatible and integrated with the existing mechanical system and in accordance with the relevant applicable Standards Engineer's instructions. -The contractor shall take all necessary measures to protect his works, ensure safety of his worker and the hospital patince and visitors, and prevent interruption of the ongoing operation of the hospital during the implementation of the rehabilitation works. -The contractor shall provide project closing documents such as-built drawings, catalogues, manuals and free training to the hospital maintenance team on the maintenance and operation of the systems rendered in the building. | Note |  |  |  |
| **4** | **I-HVAC system** |  |  |  |  |
| I1 | Supply, install, test and commission split air conditioners unit- stand type, similar to YORK, Carrier brand or equally approved .The AC units shall be according to the below specifications :  Capacity : 42000 BTU, pre charged with R22, washable screen anti-bacterial filtration, ambient temp range (-10 to +45), power supply source 380V /3PH /50HZ, digital, multi-function LCD remote. The price shall include one year warranty period and all associated electrical and AC material and workmanship, such as waterproof outdoor unit, insulated copper pipes, drain pipes, galvanized steel holders..etc, complete; in accordance with the manufacturer's instructions and the Engineer's. The contractor should submit shop drawings for the Engineer's approval.  Note:- This units will be install in the air compressor room. | No | 2 |  |  |
| I2 | Ditto, but wall type split unit capacity 18000 BTU, power supply source 220V /1PH /50HZ. | No | 15 |  |  |
| I3 | Ditto, but wall type split unit capacity 12000 BTU, power supply source 220V /1PH /50HZ | No | 20 |  |  |
| I4 | Ditto, but duct type split unit capacity 24000 BTU, power supply source 220V /1PH / 50HZ and 15% fresh air. The price shall include all required fittings and accessories, galvanized hangers, bolts, flexible connector, 1inch thermal insulation, insulated distributor box with 3 outlet Ø20, duct works, air supply and return, ceiling diffusers (aluminum construction, white color, and quantity 5 for each one , face size 595×595 mm ), with internally insulated plenum boxes. | No | 12 |  |  |
| I5 | Ditto, but duct type split unit ,capacity 18000 BTU, power supply source 220V /1PH /50HZ,include 15% fresh air, insulated distributor box with 2 outlet Ø15, duct works, air supply and return, ceiling diffusers (aluminum construction, white color, and quantity 4 for each one , face size 350×350 mm ), with internally insulated plenum boxes. | No | 5 |  |  |
| I6 | DX Type Air Handling Units with air-cooled condensing unit (Outdoor Unit) Supply, install, test and commission waterproof DX type air handling system consisting of air-cooled condensing unit (Outdoor Unit),FAST,Carrier,Daikin ,York brands or equally approved for the operating theatre rooms. Ι- DX AHU :- Double skin construction with sandwiched insulation between the outer and inner skins, Precise control of all AHU components such as mixing dampers, water valves, pressure switches for filters and fans, suitable inspection doors for filter, room thermostats with display & remote sensor, dust filters, carbon filters, humidity controlling ,aluminum foils, fan motors shall be high-efficiency , 415+/-10% volts, 50 Hz, three phases, totally enclosed fan-cooled, IP-55 protection. And work include ducting work, grills,99.999% bacteria filters (hepa filter),with laminar flow diffuser, including 0.7 mm thick insulated galvanized sheet ducts, cladding with 0.5 mm thick galvanized sheet, and all necessary supports, hangers, and electrical panel with cabling work with all required accessories. The AHU capacity 15 ton (2750 cfm), 100% fresh air, static pressure 400 Pascal. II- AIR COOLED CONDENSING UNITS (OUT DOOR UNITS):- The Condensing unit shall be factory assembled, weather proof casing ,constructed from heavy gauge mild steel panels and coated with baked enamel finish ,heat pump,R410 refrigerant, with Scroll/Rotary compressor of reputed make complete with copper piping, HP and LP cut-outs, microprocessor based control panel, temperature controller, Thermostatic expansion valves, suitable insulation of the suction line, suitable size of fan etc.with control interface (DX Kit). The unit should be completely factory wired tested with all necessary controls. Electrical characteristics of unit shall be 415+/-10% volts,50 Hz, three phase AC,capacity 15 ton. All in accordance with the manufacturer's instructions and the relevant applicable Standards, and the Engineer's approvals. The contractor should submit shop drawings for the Engineer's approval.  Note:-The work include connection the new (DX AHU )with the existing ducts. | No | 2 |  |  |
| I7 | Conduct maintenance, repair and commissioning the entire split unit air conditioner in the clinic building and provide all missing parts such as electrical boards, fan motor, gas filling, and fix all the system defects to ensure safe efficient operation; all in accordance with the relevant applicable specifications and the Engineer's instructions. | Lump Sum | 1 |  |  |
| I8 | Extractor Fan Supply, install, test and commission high quality outdoor centrifugal extractor fan for the operation theater, similar to VORTICE or equally approved. The fan should be installed and integrated with the AHU including all required works such as supports, sleeves, dampers, duct works, electrical connections, electrical panels, cables, fittings and accessories. The fan shall comply with the following: Air flow: 1200 cfm, static pressure 400 Pascal. All in accordance with the manufacturer's instructions and the relevant applicable Standards, and the Engineer's approvals. The contractor should submit shop drawings for the Engineer's approval. Note:-The work include connect the new extractor fan with the existing ducts. | No | 4 |  |  |
| I9 | Ditto, but air flow 2200 cfm, static pressure 500 pascal. Note:- This fan will install in the operation theater corridor. | No | 1 |  |  |
| J | **Water treatment system** | | | | |
| J1 | Supply, install, test and commission Complete water treatment Skid for the operating theatres rooms (4000 liter / day) AQUA PRO or equally approved ,with (2) plastic tank size (2000 liter) with all accessories to be need, water pipe ,feeder pump Lower ,Pedrollo or equally approved (1 hp),the contractor full responsibility to check and inspect the site and to quote for all works, repairs, installations, and its associates with all material requirements, to carry out the job in accordance with relevant clauses of standards and code of practices. Note:- - This system will only feed the operating room area and the sterilization area. | No | 1 |  |  |
|  | **Total for HVAC Air- Conditioner works ..carried to summary** |  |  |  |  |
| **5** | **Medical Gazes Works** |  |  |  |  |
|  | General: -The Contractor shall coordinate with the hospital administration and the maintenance team and the Engineer during the execution of the work to acquire all necessary basic information on the existing system. - Prior to the commencement of the work, the contractor shall investigate the status of the existing installations and provide the Engineer summary reports describing list of the repair works, and detailed implementation schedule and obtain the Engineer's prior approvals to commence the work activities -Price shall cover all associated civil and electrical works such as electrical connections of the equipment making openings, performing necessary alteration in the existing walls or ceiling and connections to the existing systems. - the works shall be compatible and integrated with the existing system and in accordance with the relevant applicable Standards Engineer's instructions.  -The contractor shall take all necessary measures to protect his works, ensure safety of the hospital occupancy and prevent interruption of the ongoing operation of the hospital through out the implementation of the rehabilitation works. -The contractor shall provide project closing documents such as-built drawings, catalogues, manuals and free training to the hospital maintenance team on maintenance and operation of the systems rendered in the building. | Note |  |  |  |
| K1 | **Air Compressor System & Dryer** |  |  |  |  |
| K1.1 | Conduct maintenance, repair and commissioning of the existing compressed air system. The price shall include supply and installation of all required material for replacement of the damaged/missed parts, and restore the compressor system fully efficient and functional to the satisfaction of the Engineer. The work include all the needed electrical works, leak test, control panel, oil filter. The work shall also include supply and install exhaust duct for the two compressor air, to transfer the hot air outside the existing room; all according to specifications and Engineer's instructions. Commissioning and testing shall be executed in accordance with ISO 9170-1 / EN 13348 | No | 1 |  |  |
| K1.2 | Supply, install and commission of a new high quality floor mounted air compressor SCREW type heavy duty, oil free, similar to KAESER or equally approved. The compressor shall comply with the following requirement: capacity 1000 L/min, working pressure Max 10 Ba, 2 non return valves, safety valve, secretion device, control panel. The work shall include all required material and accessories. Price shall also include dismantling and removal of the existing air compressor; all in accordance with the manufacturers's instructions, specifications and Engineer's instructions. | No | 1 |  |  |
| K1.3 | Supply, installation, commissioning, and testing adsorption dryer unit, 2300 L/min,with all the necessary to complete the work with good performs. Note:- This air dryer unit shall be connect with the two air compressors together (existing and new). | No | 1 |  |  |
| K2 | **Medical Vacuum System** |  |  |  |  |
| K2.1 | Maintenance, rehabilitation, supply of original spare part, test, and commissioning of the existing vacuum systems the work includes, leak test, finishing works, oil change, and all that needs to work with high efficiency, all according to specifications and supervisor engineer instructions. | No | 1 |  |  |
| K2.2 | Supply, installation, commissioning, and testing new medical vacuum system ,similar to *MIL'S* or equally approved including all the necessary fittings and accessories. Note:- this new vacuum shall be connects with the existing vacuum pipes network; all according to specifications and the Engineer's instructions. | No | 1 |  |  |
| K3 | **Oxygen System Supply** |  |  |  |  |
| K3.1 | Conduct maintenance, repair, testing and commissioning on the existing Oxygen System Supply (Oxygen liquid tank, and Oxygen cylinder manifold). The work shall supply of all needed/missing parts & finishing works, testing and commissioning. The price shall also include, supply of original spare parts; all according to specifications and Engineer's instructions. | No | 1 |  |  |
| K4 | **Gas Outlets** |  |  |  |  |
|  | Note: medical gas outlets shall be tested by applying 10 bar pressure for 24 hours and in accordance with the relevant specifications. | Note |  |  |  |
| K4.1 | Supply medical valve insert for Oxygen terminal unit similar to Taema or equally approved and in accordance with relevant French NF standard . | No | 20 |  |  |
| K4.2 | Ditto, but for oxygen regulator 10 bar | No | 5 |  |  |
| K4.3 | Ditto, but for air regulator 8 bar | No | 4 |  |  |
| K4.4 | Ditto, but for air regulator 4 bar | No | 4 |  |  |
| K4.5 | Supply a single stage medical Oxygen Regulator(cylinder connection), similar to Taema or equally approved | No | 10 |  |  |
| K4.6 | Ditto, but for Nitrous Regulator (cylinder connection ) | No | 10 |  |  |
| K4.7 | Supply new Oxygen Flow meter with humidifier, similar to Taema or equally approved, dual action reusable bubble or aerosol humidifier .Provide high output unheated aerosol to increase relative humidity for respiratory therapy; all in accordance with relevant specification and the Engineer's instructions. | No | 130 |  |  |
| K5 | **Medical Sterilization System** |  |  |  |  |
| K5.1 | Conduct maintenance, repair test and commissioning of existing Sterilization System WLBECO series model EC280 and 580 liters from *Matachana group*. The work include mobile supplying of mobile platform,suply of original spare parts, replace all damaged /missed parts and all needed repair works to restore the sterilization system fully functional in accordance with relevant specification and the Engineer's instructions. | No | 2 |  |  |
| K5.2 | Ditto as above, but for Brand (BMM WESTON), model (V 9932),serial No (DH 15510). | No | 1 |  |  |
| K5.3 | Supplying, installation, testing and commissioning of a new steam generator (Boiler), 72kw, 3.5 safety pressure, 4 heater. The new boiler must be compatible and integrated in the existing sterilization system BMM WESTON; all according to specifications and the Engineer's instructions. | No | 1 |  |  |
| **5** | **Total for Medical Gazes works ..carried to summary** |  |  |  |  |
| **Summary** | | | | | |
| **Bill** | **Description** | | | | **Amount USD** |
| 1 | Total for Civil Works |  |  |  |  |
| 2 | Total for Plumbing and Sanitary Works |  |  |  |  |
| 3 | Total for Electrical Works |  |  |  |  |
| 4 | Total for Air-Conditioner Works HVAC |  |  |  |  |
| 5 | Total for Medical Gazes Works |  |  |  |  |
|  | Grand Total USD |  |  |  |  |