



UNITED NATIONS DEVELOPMENT PROGRAMME

ITB 2015-121

**Lot 15-A
WBS 1403**

Bill of Quantities

Programme Title: Right to Education in the Gaza Strip

Project name: Renovation Works For Al-Azhar University in Gaza

PAL10- 00094739- LOT 15A



UNITED NATIONS DEVELOPMENT PROGRAMME

ITB 2015-121

Rehabilitation of Damaged Buildings

Rehabilitation of Damaged Buildings					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
	<p>General Notes:</p> <p>1- Complete detailed shop drawings should be delivered to the Engineer to take his approval prior the commencement of work. Samples of all materials shall also be delivered to the Engineer to take his approval,</p> <p>2-Contractor shall take into consideration that all – direct and indirect works and their relevant expenses required for proper implementation of the project including temporary facilities, fencing, securing utilities (water, wastewater, telephone and electricity systems) as well as making access to project implementation location away from the one in use by the students and teachers such that the university is running safely without disturbance. The contractor will be accountable for all necessary equipment, materials and activities to assure the safety of people within the university buildings and vicinity, where an approved safety plan will be prerequisite to initiating activities along with installing all required components and materials necessary for safety of workers, project team as well as people at university. All relevant costs are deemed to be included in the unit price in addition to the required re-instatement works needed to bring the original facilities to its original status before addition of temporary works.</p> <p>3-The contractor will expect that more than one contractor will be carrying out works in the university at the same time, the Contractor is presumed to make all necessary coordination and facilitate accessibility to and other work-related issues</p> <p>4-All works and installations listed here below should be carried out, tested and commissioned by specialized responsible skilled labours in full coordination with the university engineering office , all in accordance with drawings, specifications and relevant standards, and the instruction of the Engineer. The Engineer has the right to reject any component of the work not complying with the specifications and the terms of the contract.</p> <p>5- The contractor shall submit detailed implementation work plan and method of statement Coordination with the engineer and the university Not inconsistent with the working hours of the university and the students before starting the work.</p>				

Rehabilitation of Damaged Buildings					
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1	Earth Works:				
	<p>Contractor shall take into consideration that all – direct and indirect works and expenses required for the completion of the coming items are included in the unit price. Measurement is engineering measurement.</p> <p>All works must be according to drawings, specification and engineer instructions. Rates shall include :</p> <p>1. Shoring the sides of excavation and preserving the adjacent buildings as well as existing infrastructure utilities (sewage, water, telecommunication and electricity works). In case of damages that may incur, all relevant necessary repairs will be the contractor responsibility to cover its relevant costs.</p> <p>2. Cleaning the site and removing all debris, surplus unwanted materials and rubbles to approved dump site.</p> <p>3. Backfilling in layers not more than 25cm thick for each layer and compaction to 98% of MDD.</p> <p>4. All required Tests by an accredited laboratory.</p> <p>5. The cadastral survey and leveling of existing status at grids not exceeding 5 m in both directions.</p> <p>6. Leveling and backfilling from imported sand dune in case excavated materials are not approved for backfilling and up to the level of the top of external ground beams levels and to the formation level of apron and surrounding landscaping.</p>				
1.1	Supply ,spreading ,leveling , damping and compacting (Compacting 100%) 15cm base coarse material including removing trees, leveling of subgrade, removing trees or any other obstruction items available in the proposed area and removing all arising debris from the site according to specifications and engineer instruction.	M2	100		
Total					
2	Demolish Works:				
2.1	Demolishing works for the purpose of opening door (100*220 cm) in existing wall located at the central building behind Bisan hall, and where is required as per drawings and engineer instructions. The unit price shall include cost of conducting necessary repair work, plastering, painting ,fixing, removing all the debries and all materials needed to finish the works according to specifications , drawings and supervisor engineer instructions	NO	1		
Total					

Rehabilitation of Damaged Buildings					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
3	Concrete Works:				
	<p>Rates of Concrete Works shall include:-</p> <ol style="list-style-type: none"> 1. All form works and shuttering (new lumber for shuttering painted by special oil (fuel or burnt oil is not accepted) in any form, shape and size . Making chamfered and curved edges, allowing for and making grooves and sleeves and using Tie Rods (Batant) for concrete walls ; removal of forms and cleaning of all exposed tie wires and rods. Steel forms must be used in shuttering the external decorations. 2. Supplying, Casting, vibrating and curing as per specifications. 3. Approved additives and admixtures. 4. Developing new Concrete Job Mix Designs, Sampling , testing and providing test results certificates, storing and saving of samples. 5. Painting of exposed surfaces of underground reinforced concrete elements with two coats of hot bituminous paint (75/25) after primer layer , the strokes of each layer to be opposite to each other. 6. Preliminary installations for Electrical, plumbing and floor drainage in floor slabs including final floor slab. 7. Compaction and testing under the foundation, ground beams, ground slabs and Apron. the compaction should not be less than 98% of MDD. 8. All works according to specifications , drawings and supervisor engineer instructions 9. Supply, fabricate and fix reinforcement steel ($f_y = 410$ N/mm²) for all the structural elements according to drawings and engineer's instructions for any grade, size and length as detailed in the drawings, storing on site including cutting, bending and fixing in position and providing all tying wires, spacers, shop drawings, testing and bar bending schedules .All works according to specifications , drawings and supervisor engineer instructions 10. In rehabilitation works, supply fabricate and fix steel dowels to the existing concrete using special materials. In case of lapping with existing steel reinforcement, rates will include cleaning rust and treatment with special materials 11. In case after excavation the new columns locations and relevant footings coincide with the existing ones, the contractor will make modification to adapt implementation to the existing conditions and deemed to include in his rates relevant costs accordingly. 12. the works shall include removal of any existing insulation sheets, foam concrete, development of columns steel with the existing by using epoxy material , rates will include cleaning rust, treatment with special materials, the insulation shall be reinstated around the new constructed part. 14. The unit price includes demolish and removal of any required elements to complete the work according to the new design. <p>All rehabilitation works will include the necessary extra steel reinforcement and concrete to be applied in layers if necessary in addition to the necessary special materials and accessories.</p>				

Rehabilitation of Damaged Buildings					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
3.1	Supply & cast ready mix concrete (300kg/cm2) for columns according to the drawings including drilling and fixing development steel bars into the existing ground beams using epoxy material according to drawings and instructions of the supervisor engineer (the central building, behind Bisan hall)	m3	10		
3.2	Supply & cast ready mix concrete (250kg/cm2) for suspended hollow block slab 25cm thick, including the lightweight hollow cement blocks with (weight of no more than 5kgs per block), 40*25*17cm diemensions, hidden, inverted & drop beams, reinforcement steel and all the required materials and finishing the roof by trowel machine.	m2	230		
3.3	Ditto but for lintels, sills, arches, with reinforcement of 2@10 Top, 2@10 Bottom & stirrups of T8/20cm, The work includes supply of necessary materials according to the standards and instructions of the supervisor engineer	m3	3		
Total					
4 Building Works:					
	The price include: 1- supplying hollow or solid cement block from good and approved factory in perfect dimension and build it in good manner with a compressive strength 35 kg/cm2 for hollow block and 60 kg/cm2 for solid block. This item will include cement mortars, hot galvanized steel ties, reinforced concrete infill (B250) between columns & block walls (10-20 cm wide) with 1Ø8mm/40cm horizontally and 2Ø8mm vertically according to drawings, pipes encasement, false columns 20x20 cm/4.0m among the parapet wall with 4Ø12mm and bituminous paper between block work and drop beams and testing as well as all requirements needed to finish the works according to the drawings, specification and to the supervision engineer instructions.				
4.1	Supply and build hollow cement blocks 40x20x20cm. (The central building, behind Bisan Hall)	M2	80		
Total					

Rehabilitation of Damaged Buildings					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
5	Finishing Works:				
	<p>A- Plaster works All works must be according to drawings, specification and engineer instructions. Rates shall include :</p> <p>1-Supply of all needed materials, including hot galvanized angles for the corners, windows and external decoration as well as the use of hot galvanized wire mesh between concrete and block work.</p> <p>2-Preparation works by covering all conduits of electricity, water supplies , etc, with a hot galvanized wire mesh at least 20cm width coated by mortar (1:1) cement : sand and the work includes removal of wires and nails and cleaning of surfaces to be ready for plastering.</p> <p>3- Contractor shall take into consideration that all – direct and indirect works and expenses required for the completion of the coming items are included in the unit price.</p> <p>4-Trimming of concrete chippings, removing the wires and etc. and cleaning of existing surfaces to be ready for plastering.</p> <p>5- Checking out all of the preliminary installation in ceilings and walls such as electrical, water supply and waste water pipes and repairing the damages if any.</p> <p>6- Curing with water for at least three days for each coat. This should be done prior to commencement of plastering and after obtaining a written approval from the supervision engineer.</p> <p>B- Tiles works All works must be according to drawings, specification and engineer instructions. Rates shall include :</p> <p>1. Samples for approval and all the required tests.</p> <p>2. Cleaning, mechanical polishing and pointing using grout.</p> <p>3.Insulation works under ceramic floor tiles for all wet areas and kitchens using primer coat, two hot bitumen coats (75/25)</p> <p>4. Plastic angle beads for ceramic wall tiles at the corners and top and sides of ceramic edges.</p> <p>5. Local marble must be Grade (A) free cracks and clay flaws.</p> <p>6. Measuring the stockpiled quantities of tiles and obtaining the engineer approval prior to shipment to the site.</p> <p>7.Transporting and carefully handling the stored quantities to the site.</p> <p>C- Painting works Rates for painting and decorating work shall include for:</p> <p>1. Preparation of surface including puttying, sealing and priming,</p> <p>2. Any area or width,</p> <p>3. Any location,</p> <p>4. Work in multi colours,</p> <p>5. Cutting in edges,</p> <p>6. Any taping and covering to protect areas and others.</p> <p>All the painting materials should be approved and tested by approved local laboratory</p>				

Rehabilitation of Damaged Buildings					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
5.1	Supply and make internal plastering 13 mm thick for ceiling ,walls and soffits. The work includes rough primer nail rendering to form a key with (mix 1:1) cement sand, second layer 13mm: Base-Coat "Rendering" with (1:3:0.25) cement: sand mortar: lime and third layer: Finishing Coat with (1:1:1) cement: sand mortar: lime . The price includes scaffolding, removal all existing finish, all materials needed to finish the works according to specifications , drawings and supervisor engineer instructions	M2	410		
5.2	Supply and make external plastering 20mm thick to walls with 3 faces : the first is the rough nail rendering (mix 1:1) cement sand; the second is 5mm thick mortar (mix 1: 2) cement:sand, the third is the undercoat 13mm (mix 1: 3 :0.25) cement:sand:lime all is according to specifications , drawings and supervisor engineer instructions.	M2	75		
5.3	Supply and install (Stone Finish) for external elevations to match the existing in the "K" buildings. The price includes scaffolding, removal all tyrolean finish layer, maintainance all existing plaster after removal tyrolean layer, repaing cracks, preparing the surface to install the new layer, covering the windows by polytherene sheets, disamantle, refix and commission air condaitionars, pipes, advertisement panels and any other required works to complete the job according to specifications, and engineer instruction. (Drawings A06-A16)	M2	7375		
5.4	Supply & paint two coats of colouerd internal emulsion paint (Supercryle) .The works include removing the old paint and plaster repairing, testing, Treatment of cracks including cleaning, rubbing, open, filling with sikaflex, closing openings, repairing plaster in the walls up to (20*20 cm) and cleaning the surface as specification and drawings.	M2	4110		
5.5	Supply and paint the internal walls two coats of putty one undercoat primer and two coats of colored oil paint and the price including plaster repairing, testing, Treatment of cracks including cleaning, rubbing, open, filling with sikaflex, closing openings, repairing plaster in the walls up to (20*20 cm) and cleaning the surface as specification and drawings.	M2	500		
5.6	Ditto but (Prestigue) paints for walls and ceiling	M2	250		
5.7	Ditto but (Antica bear) paints for walls and ceiling	M2	100		
5.8	Supply and install Non slipping Porcelain Floor Tiles (full body) size 40cm x 40cm x 8 mm (Spanish Made Class A or equivalent) with color ratio of 1:3. The price include skirting 40cmx10cm x 8mm and removal of the existing tile to approved dump site. all works according to specifications and engineer instructions. (The central building, behind Bisan Hall - Drawing A05)	M2	400		
5.9	Supply and install non-slipping colored ceramic floor tiles high quality (Spanich made Class A or equivalent, size 40x40x0.60cm for bath rooms, toilets and kitchens, The price including dismantling and removal of old tiles, skirting 7cm height wherever no wall tiles required, pointing using special pre-mix grout and final polishing as per specifications and supervisor engineer instructions (building K3, k5, A2)	M2	100		

Rehabilitation of Damaged Buildings					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
5.10	Supply and fix color glazed ceramic wall tiles, Type (Plaza) or equivalent, size 20x40x0.60cm for corridors up to 160cm height, (two colors). The price includes removal of the existing paints and plaster, lime free key nail then plain plaster layers and pointing using special pre-mixed grout and hardwood (Zaan) crash rails size 70mm x 50mm with round edges, smooth surface, apply one coat of sanding sealer, two coat of approved lazoure paint and one coar of lucker, drill and fix to concrete or block walls using expansion steel bolts as specifications and supervisor engineer instructions.	M2	150		
5.11	Ditto , but 20x40x0.60cm for the toilets and for the whole wall height. (The prices includes removal of existing tiles to approved dump site)	M2	200		
5.12	Supply and install of mosaic around door frame, avgerage 16cm wide, the exact measurements and colors to be determined by the supervisor engineer, the price includes removal of the existing ceramic, plaster, paint and preparing the surface to apply the mosaic layer. The installing to be completed by adhesive material (bgiebont 21/21) and finishing works as per specification and supervisor engineer instructions.	M2	50		
5.13	Supply and fix fire rated gypsum boards for the partitions (two sides) with thickness of 8cm, The price includes hot galvanized metal studs standing frame (each 60*60cm for both sides), 1.5mm thick steel channels, bolts, screws, 7 cm PVC skirting, accessories, dismantle and refix of existing moquette in addition to install moquette skirting on the partition and all necessary works according to supervisor engineer instructions. (Drawings A17,A18)	M2	30		
5.14	Supply and install terrazzo floor tiles (grade A) size 30cmx30cmx2.5cm with marble chips laid on 2.5cm mortar bed and 5 cm thick sand bed the price includes terrazzo skirting, dismantle and removal of the exsiting tiles to approved dump site according to the supervisor engineer instructions and specifictions.	M2	100		
5.15	Supply and install decorated polystyrene ceiling tiles for false ceiling of 60*60cm or 120*60cm manufactured by ArmstrongPrima-Dune or approved equivalent. The price includes complete maintenance for the suspension system including replacement of any defected hot galvanized steel hanger wire, hold down clip, wall molding, main and cross bar according to engineer approval. (Drawings A19,A20) The contractor must visit the site before pricing	M2	500		
5.16	Supply and install high quality Granite (Tiger Absolute), 2cm thick, to replace the existingthe price includes making holes for sinks, water and gas supply, dismantel ,refix, maintain the existing sinks, fitting and all accessories and removal of the existing to approved dump site acoording to specification and engineer instructions. (Building A1+A2+A3+A4, Drawings A21,A22)	M2	70		

Rehabilitation of Damaged Buildings					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
5.17	Supply and install local marble (grade A) composed of two layers, the first is 26cm wide x 2cm thick where the second is 10cm wide *2cm thick for windows sills laid on 2 cm thick mortar bed. The price includes dismantle and refix of the existing windows, removal of debries to approved dump site, any needed manitanence regarding plaster & paint around the windows (internal & external), polishing and grooving of the new sill as approved by engineer and as specifications.	L.M	300		
5.18	Supply and lay Berlato stair treads size 33 cm wide x 3cm thick chamfered once , rebated once and laid on 2cm thick mortar bed. The price including Berlato stair risers size 15 cm high x2cm thick. Granite Berlato triangle shape skirting 2cm thick on the both sides, removal of existing stairs to approved dump site as per engineer instructions and specifications. (buildings K1+ k3+ A2 +A3, Drawing A23)	L.M	100		
5.19	Supply and install hand wash basin set. The price includes high quality Granite (Tiger Absolute), 280*60cm, 2cm thick, local marble partition, 3cm thick No. 5, 3 hand wash basins (Vitra type or equivalent), 3 water mixers (Hamat Type or equivalent), mirror 60*60cm, floor trap, drainge pipes 2" connected to the nearest manhole, water supply connections (20mm, 25mm Golani pipes inside sleeves (Sharshori)) from the nearst distibution box (central buiding, behind Bisan building, Drawing A24)	lump sum.	1		
5.20	Supply and install high quality Granite (Tiger Absolute), 60cm wide, 2cm thick, for top cover of buffet. The price includes local marble grade A 3cm thick for two direction supporting, for, back, shelves, skirting, and all accessories, fitting and making holes for sinks and water and gas supply, stainless steel water sink (fooster type or equivelent), water mixers (Hamat Type or equivalent), floor trap, drainge pipes 2" connected to the nearest manhole, water supply connections (20mm, 25mm Golani pipes inside sleeves (Sharshori)) from the nearst distibution box (central buiding, behind Bisan building, Drawing A24).	LM	7.5		
5.21	Supply and install bench (Type BT1), 70cm wide, 95cm high, the price includes Granit (tiger absolute)2cm thick, stainlss steel profiles30*30*1.25mm, plywood 17mm coverd with fromica from all sides. all required accessories and materials (Including wires) to complete the job as per specifications, drawings and engineer instructions. (Drawing A36-A38)	l.M	6		
5.22	Ditto but size 240*120 (Type BT2) (Drawing A39)	No	1		
5.23	Supply and install glass block size 19×19×8cm (To match existing) to replace the broken blocks by using white cement and quartz the price includes removing all depris to approved dump site according to engineer instructions and specifications (entrances Northern Scientific Building)	No.	30		
5.24	Supply and Execute Interlock 6 cm thick to match the existing in the university yards. The work include spray and leveling of 5cm clean sand, the item include removing the destroyed parts and replaced with good one and deliver to the university according to specifications and engineer instructions.	M2	150		
Total					

Rehabilitation of Damaged Buildings					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
6	Plumbing Works:				
	<p>(1) In general rates for plumbing works shall include for:</p> <ol style="list-style-type: none"> 1. Developing shop and as built drawings 2. Cutting and forming all chases, recesses, holes, and the like, 3. Pipe sleeves, 4. Building of concrete and/or brick ducts in floors, walls ...etc., 5. Excavation, forming of trenches for services, concreting, bedding and back filling and ramming after laying, 6. Fixing brackets, clips, holder bats, hangers, and the like, 7. Temporary and final fixing, 8. Nails, screws, bolts, nuts, washers, holes, plugs, sleeves and the like, 9. Building in or cutting and pinning, 10. Testing and drawings, 11. Painting of pipes, 12. All work of other trades in connection with plumbing work including all making good. <p>(2) Rates for manholes and pits shall include excavation, concrete, benching, plastering, backfilling and cover as per Drawings and Specifications,</p> <p>(3) Rates for sanitary fittings, isolated taps and gullies shall also include all pipe work in connection therewith and connections thereto including connection to the nearest manhole or gully and to the cold water storage tank.</p> <p>(4) Rates for pipe work including pipe work in frames to shading sheds shall include for:</p> <ol style="list-style-type: none"> 1. Joints in the running length, 2. Nipples, connections, sockets, ferrules, couplings, back nuts, unions, and the like, 3. Bends, elbows, tees, reducers, access doors, cleaning eyes, blank caps, stop valves, and the like, 4. Welded joints and connections including grinding, 5. Lagging and wrapping, 6. Excavation, bedding and backfilling. 				
6.1	Supply and fix white glazed fire clay hand wash basin size 52cm x45cm (Vitra type - grade A) or equivalent, complete with all water supply pipes 16mm (Golany) to the nearest distribution box (DB), waste fitting, trap, plug and chain, long chromium water tap (Hamat type or equivalent), and the drainage line 2" to the nearest floor trap.	No.	12		
6.2	Supply and fix white glazed fireclay European W.C. suite (Vitra type - grade A) to replace the existing (oriental W.C) complete with heavy duty cover, 9 liter plastic double action flushing cistern (Plasan or equivalent) and fixed chromium plated tap 1/2" Tibesa type or equivalent, including all water supply pipes 16mm(Golany) to the nearest dist. box (DB), flushing hose sprayer, angle valves, UPVC drainage pipe connecting to the nearest manhole or sewage header and remove the existing to approved dump site as per specifications and supervisor engineer instructions.	No.	20		

Rehabilitation of Damaged Buildings					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
6.3	Supply and install fixed chromium long neck plated tap 1/2" Tibesa type or equivalent including required maintenance for water supply and drainage network and supplying any required materials (16mm Golany, 2" pipes, 3" pipes,...) drawings and supervisor engineer instructions.	No.	15		
6.4	Supply and install plastic double action flushing cistern (Plasan or equivalent) including required maintenance for water supply and drainage network and supplying any required materials (16mm Golany, 2" pipes, 3" pipes, 4" pipes...), flushing hose sprayer and all connections and accessories as per specifications and supervisor engineer instructions.	No.	50		
6.5	Supply, install, test and commission water network in several places, the price includes maintenance for existing network, replacing any defected parts, supplying 16mm, 25mm, 32mm Golani type (in sleeve pipe (Sharshori type)), brace fitting, valves, connection to the main water network, local marble distribution box (60*80cm) with Aluminium door with lock and any required accessories to complete the work according to the drawings, specifications and engineer instructions.	Unit	6		
6.6	Supply and install 160 mm outside diameter UPVC Pipes with wall thickness 4.7 mm to replace the existing, the price includes excavation in depth till 2 m below existing ground level, dismantle and re-fix of interlock tiles and base coarse 20 cm thick, cut of asphalt, reinstatement of asphalt layer, supply and install spread 25 Cm compacted base coarse layer (under asphalt), leveling, keeping all facilities working, remove all surplus materials to approved dump site and connecting to the nearest municipal main manhole, all as per specifications, drawings and supervisor engineer instructions. (Drawing M 01). The contractor should submit detailed work plan before implementation.	L.M	60		
6.7	Ditto but for 4" UPVC pipes with a thickness of 3.5 mm.	L.M	32		
6.8	Ditto but for 4" UPVC external vertical drainage pipes including all connections, Tees, bends, fittings, and 4" UPVC vent for upper end of pipes. The price includes scaffolding and removal of existing ones to approved dump site, all as per specifications, drawings and supervisor engineer instructions. (laboratory building A3, Drawing A26)	L.M	50		
6.9	Supply and install 2" Dia. PVC pipes for internal drainage network.	L.M	70		
6.10	Supply and fix floor trap 4inch diameter, complete with heavy duty brass grating and 4" & 2" PVC drainage pipe to the nearest manhole or next F.T and including S trap if needed as specification and drawings.	No.	20		
6.11	Supply, install and commission water network for hand wash basin set and buffet in the central building, the price includes 16mm, 20mm Golani type in sleeves (Sharshori type), brace fitting, valves, connection to the main water network, local marble distribution box (60*80cm) with Aluminium door with lock and any required accessories to complete the work according to the drawings, specifications and engineer instructions.	lump sum.	1		

Rehabilitation of Damaged Buildings					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
6.12	Supply and fix water storage plastic tank 1.5 m3 capacity with locks for cover, with approved type not less than 32 kg weight, complete with lockable cover,1 inch diam. automatic float valve, overflow pipe (1”diam) and drip tray, with all connections for rising main and distribution pipe work and stop valves 1”,(painted steel stand avrage size 120*120*200cm and steel angels 50*50*4mm coverd with soft wood 130*130*5cm) with all accessories as specification and drawings, including painting tanks with white oil paint .	No.	2		
6.13	Ditto but for 1 m3 capcity.	No.	2		
6.14	Ditto but Supply and fix water storage plastic tank 3 m3 capacity with locks for cover, with approved type, complete with lockable cover,2 inch diam. automatic float valve, overflow pipe (2”diam) and drip tray, with all connections for rising main and distribution pipe work and stop valves 2”,(reinforced concrete base 10cm thick, 1T8/25cm both directions, with diemensions of +20cm of the tank from each side), two hot galvanized steel straps around the tank with all accessories as specification and drawings, including painting tanks with white oil paint.	No.	3		
6.15	Supply and Install centrifugal pump DAP or equivalent with capacity = 8 m3/hr and head equal 60 m. The item includes all the required fittings & equipments (valves, T, elbows, non return valves,. etc.), also the item includes painted steel box protection 80*80cm with lock, roofing steel sheets 2mm, steel wire mesh 3mm thick from whole sides, automatic operation device, connecting to electrical source with needed cables and to be installed on a reifored concrete floor 100*100*30cm thick, all as supervisor engineer instructions as specification and drawings	No.	4		
6.16	Supply and install concrete manhole of internal diameter 80 cm ,and not less 120 cm depth according to the required level, 15cm thick concrete for walls and base, slab, with cast iron cover with frame 60cm opening, 25 ton bearing capacity, including excavation, backfilling, hunching and making good according to specification ,drawing, and the engineer instructions. (Behind the central Building, Drawings M01,M02)	No.	6		
Total					

Rehabilitation of Damaged Buildings					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
7	Insulation Works:				
	<p>(1) Rates for foam concrete/ cement and mortar work shall include for:</p> <ol style="list-style-type: none"> 1. Supply and storage of cement. 2. Supply and storage of aggregates and water, 3. Mixing, 4. Hacking concrete, applying cement slurry or raking out joints of block work to form key, 5. Application to any surface, 6. Finish to surface, 7. Finish to falls and cross falls, 8. Forming bays including joints, 9. Finish to edges, 10. Making good around steel sections, pipes, tubes, bars, brackets, outlets, and the like, 11. Ends, intersections, ramps, and the like, on fillets, <p>(2) Rates for waterproofing shall include for:</p> <ol style="list-style-type: none"> 1. Preparation of surface, 2. Any area or width, 3. Cutting in edges. 4. Over laps, priming and treatment at the corners and floor drains. 5. Testing for the roof with water 6. Dressing over parapets and stub columns including forming groove to receive edge of plasticised bitumen membrane and sealing with elastic sealer. <p>(3) Rates for roof sheets shall include for:</p> <ol style="list-style-type: none"> 1. Side and end laps, Fittings including bolts, hook bolts, screws and washers, 2. Sheets of any width or length. 				
7.1	Supply and install insulation for bathrooms, high quality primer, 1 layer of hot bitumen (75/25), 1 crossing layer of fiberglass, another layer of hot bitumen (75/25), another crossing layer of fiberglass, and final layer hot bitumen (75/25) respectively and to be opposite to each other, the prices includes cement and sand mix for fillets 5*5cm, insulation of skirting and required materials to complete the job as per specifications and engineer instructions.	M2	170		
7.2	Supply and cast foam concrete with fine aggregates for roof screeding of average thickness 10 cm.	M2	240		
7.3	Supply and lay one layer of plasticised bitumen roofing membrane with chipping 4 mm thick, including priming concrete surface prior to laying, dressing into rainwater outlets to form waterproofing seal and cover with angle fillets. The rate includes verticals parts skirting as per specification and drawings. Note: Measurement will be for the horizontal projection	M2	240		
7.4	Supply and Execute expansion joint on the roof as detailed in drawings including, polystyrene sheets 2cm thick, mastic sealant as per specification and drawings. Note: The concrete work not included	Mr.	40		
7.5	Supply and Execute expansion joint in the corridor floor as detailed in drawings, including polystyrene sheets 2cm thick, mastic sealant, aluminum angles 40x65x3mm or hot galvanized steel sheets 350*2mm the work includes dismantel existing protection steel, demolish safely corridor concrete and block walls and any required work as in specification and drawings.	Mr.	70		

Rehabilitation of Damaged Buildings					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
7.6	Supply and Execute expansion joints and cover for columns and corridor soffits as detailed in drawings including polystyrene sheets 2cm thick, mastic sealant and aluminum strip size 100 x 3mm or aluminum angles 40x65x3mm screwed to walls or soffits from one side as per specification and drawings.	Mr.	50		
7.7	Supply and fix polystyrene sheets 2cm thick for foundation's expansions joints as per specification and drawings.	M2	50		
Total					
8 Aluminium & Metal Works:					
	<p>The items include supplying aluminum windows section 7000 matching the existing ones, with min. wall thickness 1.5mm (to be approved by representative engineer) as frame, glass 4 mm thick, ironmongery , accessories and hard ware along with fixing as per specification and drawings. All maintenance works include all needed materials for reinstatement and workmanship.</p> <p>The composite panels must be customized for external use (PVDF paint filled with white polyethylene) and accredited by the Palestinian standards' institution</p> <p>All composite works must be fixed on hot galvanized steel structure profiles 2x2 cm with thickness 2 mm or as specified in each item.</p> <p>the price of compsite works shall includes filling spaces between composite boxes with sikaflex or equivalent.</p> <p>Steel work should be properly treated and prepared, painted with two coats of oil paint,one primer (polyzinc) and one undercoat.The price shall include removing the damaged aluminum and steel works and handing to the the university engineering office</p>				
8.1	Replacement of broken clear glass 6mm thick and damaged ironmongery and hardware for the existing aluminume doors and windows and as per specifications, drawing and/or the engineer's instructions.(All unverisity Building)	M2	100		
8.2	Ditto but reflector glass 6 mm thick (building K5+K4)	M2	50		
8.3	Supply and install clear glass 6mm, with chamfered edges for offices' desktops as per specifications and the engineer instructions. (All offices)	M2	100		
8.4	Supply and fix powder coated color Aluminium window leaves (grade A) equivalent to Klil 7000, sliding leaves ,reflector glass 6mm thick, ironmongery and hardware, identical to existing windows and as per specifications and/or the engineer's instructions (building K5)	M2	50		
8.5	Ditto but Aluminium type 1088, clear glass thickness 6 mm	M2	60		
8.6	Ditto but Aluminium type 4500, top hinged type, powder coated color, reflector glass 6mm, identical to existing	M2	30		
8.7	Ditto but Aluminium type 4500, top hinged type, powder coated color, clear glass 6mm, identical to existing	M2	20		
8.8	Maintenance and fix powder coated colored Aluminium window type (grade A) equivalent to Klil 4500 complete with frame, leaves ,obsecure glass 6mm thick, ironmongery, hardware and all required accessories as per specifications, drawing and/or the engineer's instructions	M2	40		

Rehabilitation of Damaged Buildings					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
8.9	Supply and fix powder coated color Aluminium window (grade A) equivalent to Klil 7000, complete with frame, sliding leaves ,reflector glass 6mm thick, ironmongery and hardware, to match the existing windows and as per specifications, drawing and/or the engineer's instructions	M2	45		
8.10	Ditto but with clear glass 6mm	M2	220		
8.11	Maintenance of Aluminium door including replacing jack with bottom one, 8mm reflector glass and all ironmongery, hardware and all required accessories as per specifications, drawing and/or the engineer's instructions	M2	3		
8.12	Supply and fix Aluminium partitions type 2000 including rough glass 6 mm, composite panels at bottom of partitions, doors, locks, jack, ironmongery, hardware and all required accessories, to match existing partitions and as per specification, and/or the engineer's instructions. (Drawing A40)	M2	90		
8.13	Supply and install aluminium door type 2000 (100*220cm) with clear glass 8mm thick, jack and all ironmongery, hardware and all required accessories as per specifications, drawing and/or the engineer's instructions	No.	3		
8.14	Supply and install Aluminium handrail for stairs and ramps with height of 85 cm, the price includes pipes of 5cm Dia., 2.5mm thick and vertical pipes 4cm Dia., 2.5 mm thick, each 70cm, three longitudinal 16mm pipes each 17cm, vertical pipe 6.5cm Dia., 2.5mm thick each 200cm, the works includes fixation by steel rods with special adhesive materials, elbows, clips, stainless steel bolts, all accessories required to complete the job, the price also includes, dismantle the existing steel handrail and deliver to university stores according to specifications, drawings and engineer instructions. (Drawing A27)	L.M	80		
8.15	Supply and install polycarbonate thickness of 4 mm for the entrance door in Central Library building	M2	25		
8.16	Maintenance and paint of steel protection, the price includes smoothing, filling all the voids with special putty, removing rust of steel by sand paper, primer coat, undercoat and two oil coats as per specifications and the engineer instructions.	M2	750		
8.17	Supply and fix steel protection for windows to match existing. The price includes painting with one coat of primer, undercoat and at least two coats of oil paint., fixed on walls by steel angle ties and plates, all according to drawing, specification and engineer instructions. (Drawing A25)	m2	125		
8.18	Ditto but for sports hall with additional wire mesh 3mm thick, fixed on hot galvanized steel angles 30*30*3mm. The price includes fixation by steel plate 20*2.5mm each 60cm, painting with one coat of primer, undercoat and at least two coats of oil paint., fixed on walls by steel angle ties and plates, all according to drawing, specification and engineer instructions. (Drawing A25)	m2	85		

Rehabilitation of Damaged Buildings					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
8.19	Supply and fix flush galvanized steel double external door (100 x220x4.4cm), new double sheets (2-mm thick), complete with frame 3mm thick, ironmongery, hardware and one primer coat, one under coat and minimum two coats of colored oil paint, with hard ware locked type Wally switch or equivalent and all requirement as latches, locks...etc as specified in the drawings and specifications.	No.	1		
8.20	Supply and fix mild steel balustrade 100cm high comprising of solid bars 16*16mm verticals spacing 10 cm *clear distance, and welded 60x40x2 mm bottom rails and 40*4mm top rails fixed by expansion bolts, rates includes painting with one primer, under coats and minimum two coats of oil paint, hardwood (Zaan) handrails size 30mm x 50mm with round edges, smooth surface, apply one coat of sanding sealer, two coat of approved lazoure paint and one coar of lucker and required accessories and material to complete the job as per specifications, drawings and engineer instructions. (Drawing A25)	L.M	100		
8.21	Supply & install Mul-T-Lock door type 417 with over all size 105cm width x 220cm height with powder coated paint. The price includes winodw of 30*35cm, two layers of 6mm clear glass, steel rod 10*10mm each 10cm between the two layers, door lock type 235 & Mul-T-Lock serrated cylinder, door stopper and all other fitting, dismantle the existing door and frame, to be delivered to university stores, casting concrete for the new frame (the works also include building blocks, R.C concrete, reinstatement of plaster, ceramic tiles, painting to match the new design). All to be carried out according to the specifications and the engineer instructions. (Drawing A28)	No.	20		
8.22	Ditto but for maintenance for Multi-lock doors, The price includes replacement of PVC cover, door lock type 235 & Mul-T-Lock serrated cylinder, door stopper and all other fitting according to the specifications and engineer instructions.	No.	17		
8.23	Supply and replace Multi-Lock door leaf 98*210cm, the price includes dismantle the existing and deliver to the university, door lock type 235 & Mul-T-Lock serrated cylinder, door stopper and all other fitting according to specification and engineer specifications.	No.	6		
8.24	Supply, install and replace defected part of the existing skourit sheets by hot galvanized steel sheet 055, the price includes complete maintenance and paint for all shed elements (space trusses, columns, girders,...etc), washers, nuts, bolts and all accessories related to complete the works all according to the drawings, specification and engineer's instructions.	m2	260		
8.25	Supply and fix rainwater hot galvanized steel gutter (U shape, 2.2mm), The work includes welding, painting with primer and two coats of approved and tested oil paints and supporting seats according to specifications, and engineer instructions.	L.M	100		

Rehabilitation of Damaged Buildings					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
8.26	Supply and install a composite letters of a prominent writing letters at the top of the building, thickness of 3mm, letter size 60*20cm or according to the type of font. The text is (Jawaharlal Nehru Library, Al-Azhar University - Gaza مكتبة جواهر لال نهرو - جامعة الأزهر - غزة) in Arabic and English, with the university logo of composite 80cm Dia. in the middle of the writing and covered from the back with PVC sheets 3mm thick. The price includes scaffolding and all required accessories to complete the work according sepcifications and engineer instructions.	NO	1		
8.27	Ditto but with text of (Central building of the scientific faculties, AL Azhar University-Gaza - المبنى المركزي للكلبات - العلمية - جامعة الأزهر - غزة)	No.	1		
8.28	Ditto but with text of (building of the deanships of the literary faculties, AL Azhar University-Gaza - مبنى عمادات الكلبات الأدبية - جامعة الأزهر - غزة -)	No.	1		
8.29	Ditto but with text of (AL Azhar University-Gaza - جامعة الأزهر - غزة), letter size of 20*50cm, fixed on stainless steel angles 5*5*3mm.	No.	1		
8.30	Supply and install sign boards, 120*80cm, the price includes alumium angles 30*30*1.5mm around the panel, composite panels 15cm wide for all sides, 3mm thick, university site layout printed on leather fixed with the alumium angles covered with clear polycarbonate 3mm thick, sliding composite panle from back 3mm thick, 2 alumium stands 40*80*2mm section, 120cm height, fixed to concrete ground with steel plates 50*120*5mm, philips screws 14mm Dia., 12cm long and stainless steel European lock according to specifications and engineer instructions. (Drawing A29)	No.	2		
Total					
9 Wooden Works:					
	The items include supplying carpentry works from good wood grade “A” including frame cover mould, architrave, sanding sealer, prime coats , at least two coats of oil paint, 15cm Aluminum kick plate 1mm thick from both sides , hard ware, locke type Wally switch or equivalent and brass hinges 10cm height, door stopper and all other fitting according to specification and drawing.				
9.1	Supply, fix & paint flushed wooden door type D1, overall size100*220*4.5cm thick, the price includes window 25*40cm with clear glass 6mm, dismantle the existing door including frame, to be delivered to university stores, the works include reinstatement of plaster, ceramic tiles, painting to match the new design. All to be carried out according to the specifications and the engineer instructions. (Drawing A33)	No	20		
9.2	maintenance wooden door overall size 210x 140x 4.5cm thick. Price included all accessories, materials and all related works as per drawings, specification and Engineer’s Instructions.	No	10		
9.3	Ditto but for 100*210cm doors.	No	20		
Total					

Rehabilitation of Damaged Buildings					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
10	Furinture Works:				
	1- The contractor shall submit shop drawings for all items. 2- The contractor has to take engineer approval for raw materials for the each item (MDF, Plywood, soft and hard wood, locks, brace hinges, stainless steel grade 304, foam 32kg/m3, high quality textile and all accessories required) before manufacturing. 3- The contract shall provide sample after manufacturing for submission. 4- All furniture works includes painting with high quality furniture paints. 5- All steel furniture shall be oven painted. 6- Type of textile shall be similar to existing in Hany Al-Shawwa hall. 7- Price includes workmanship, transportation and installation. 8- All used textile, leather, moquette and carpets must be of brand name.				
10.1	Supply and install wall mounted prefabricated white magnetic marker board size 240x120cm comprising surface of 0.4mm thick white polyester coated steel (non reflected) fixed on 12mm thick MDF complete with silver anodized finish Aluminium frame 25mm thickness X 25mm width with plastic rounded corners. The back covered with metallic paper for protection from humidity. The surface of the board must be supplied with invisible grid lines (5X5 cm) according to approved drawing and specifications. (Drawing A32)	No.	40		
10.2	Supply and install 120*50mm hardwood (Zan) rail with round edges, smooth surface, apply one coat of sanding sealer, two coat of approved lazoure paint and one coar of lucker, drill and fix to concrete or block walls using expansion steel bolts as specifications and supervisor engineer instructions. (Drawing A34)	L.M	180		
10.3	Supply and install high quality moquette (Super lugo or equivalent), the price include skirting, sticking materials, cleaning and preparation the surface to install the moquette according to specifictions and engineer instructions.	m2	1400		
Total					

Rehabilitation of Damaged Buildings					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
11	Electrical Works:				
	General: *The items in general shall also include conduits, connection boxes, controls, wires, connectors, clamps, bolts, and connecting the cables to switchboards and common electric network are included in the unit price. * Contractor shall submit shop drawings for all electrical works to be approved by the Engineer before executing the work. * As-built drawings shall be submitted after handing over the work. * All the electrical works shall be executed according to Standards, drawings, specifications and supervisor engineer instructions. * Dismantling & Removing old lighting unit (fluorescent light fixture, glops, Etc) and move to university stores as per engineer instructions.				
11.1	Supply, install, connect and test high quality single pole one way switch, 220v, 13A, for flush or surface mounted complete with plastic trenches , J. boxes, cables , cover and all necessary accessories according to engineer instructions. (Type is BTICINO MATIX or equivalent)	No	40		
11.2	Ditto but two pole (Type is BTICINO MATIX or equivalent)	No	30		
11.3	Supply, install, connect and test fluorescent lighting fixture 2x36w complete with lighting tubes 36, chock, condensers, starters rigid PVC conduits, J.boxes, fixing screws (Galv.) and wiring. (Type is GA'ASH No. 50540 or equivalent)	No	20		
11.4	Supplying, installing and operating Spot Light 8inch diamater,220V, with 32watt PL lamps for suspended false ceiling (Type is GA'ASH , Elita or equivalent) The item includes lamps Nepton made, ballast,capacitor and all necessary equipments for installation and operation as per drawings, specifications and engineer instructions.	No	45		
11.5	Ditto but Spot Light 2 inch diamater,220V, with 35 or 50 watt Halogen lamps for suspended false ceiling (Type is GA'ASH , Elita or equivalent)	No	20		
11.6	Supply, install connect and, testing high quality single outlet socket outlet 16A for the AC, 220v, 2p+E for flush or surface mounting, complete with plastic trenches , J. boxes, 3*2.5mm2 cable, and all necessary accessories.(Type is BTICINO MATIX or equivalent)	No	90		
11.7	Supplying, installing and operating Ceiling MOUNTED Fan 120cm diameter (Type is CHMC or equivalent) The item includes switch and all necessary equipments for installation and operation as per drawings, specifications and engineer instructions.	No	100		
11.8	Ditto but wall mounted Fan 22 inch (Type is CHMC or equivalent)	No	15		
11.9	Ditto but wall mounted Fan 25 inch (Type is CHMC or equivalent)	No	15		
11.10	Supply, install, connect and test 14" Extractor fan with movable louvers, complete with PVC conduits, J.boxes, wiring, and all necessary accessories. (Type is VENTA or equivalent).	No	12		

Rehabilitation of Damaged Buildings					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
11.11	Supply, install, connect and test 6" Extractor fan with movable louvers, 250cfm, complete with 6-inch pipe length of 20 cm, PVC conduits, J-boxes, wiring, and all necessary accessories. (Type is VENTA or equivalent).	No.	10		
11.12	Supply , install, test and commission air conditioning Heat Pump Split Unit, composed of out door unit. filled with environment friendly refrigerant such as (R410, R407c,..) and COP not less than 3.5, Well supported on hot galvanized steel base on the roof, indoor unit with plasma filter as indicated on drawings to be tights installed completed with all necessary supports, hangers, drain pipes from indoor unit to the nearest floor drain, (PVC Ø 1"), cupper pipes , sleeves, thermostat , Remote control and including Isolation Switch MOELLER and all required electrical power cables from SDB to the unit according to drawings and engineers approval. CAPACITY : (24000 BTU/HR). (Type is York , ELECTRA or equivalent) . □	No	12		
	Supply and install the followings breakers the work includes remove and desmantel the old MCB's in the existing panels with new MCB's as follows :				
11.13	Miniature Circuit Breaker MCB 3X50A. (Type is Moeller or equivalent).	No	1		
11.14	Ditto butr MCB 3X40A. (Type is Moeller or equivalent).	No	3		
11.15	Ditto butr MCB 3X25A. (Type is Moeller or equivalent).	No	3		
11.16	Ditto butr MCB 1X16A. (Type is Moeller or equivalent).	No	8		
11.17	Ditto butr MCB 1X10A. (Type is Moeller or equivalent).	No	8		
11.18	Residual current circuit breaker RCB 4X40/0.3A. (Type is Moeller or equivalent).	No	1		
11.19	Current transformer (100/5A)	No	3		
11.20	Supply, laying and termination of XLPE CU cable , (5x10)mm2	L.M	20		
Total					

Rehabilitation of Damaged Buildings					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
12	Equipment Works:				
12.1	<p>Supply, install, connect and test Cabinet with minimum combined trunk and station ports up to 1000 includes shelves with power supplies, processor cards including digital console .</p> <p>(Type is Siemens HiPath 3800 v9 or eq.)</p> <p>The system should be equipped of:</p> <p>550 Analogue extensions Expandable .</p> <p>30 Digital extensions Expandable 50</p> <p>1 GSM trunks</p> <p>16 analogue trunks</p> <p>The item includes (Carried to Collection):</p> <p>Cabinets:</p> <p>2 Hipath 3800 V9 , Stack</p> <p>1 Basic System Expansion Box</p> <p>Electronic Cards:</p> <p>21 Analog Subscriber Line module SLMA24</p> <p>1 Digital Subscriber Line module SLM24</p> <p>1 PRI 30 Channel (ISDC S2M Card DIUT2 , B-Channel enabled)</p> <p>2 Analog Trunk Module (TMANI) without metering (GEE)</p> <p>Intlink Cards:</p> <p>2 HG 1500 V3.0 Basic Package with 8 B-Channel enabled</p> <p>Telephone Sets:</p> <p>1 Open Stage 40T (Lava) - Main Operator Set</p> <p>10 IP Telephone</p> <p>30 Digital telephone</p> <p>2 BRI trunks</p> <p>Single processor in distributed architecture</p> <p>Dual power supply</p> <p>2 Cabinet</p> <p>Music on Hold (Recording)</p> <p>System Billing application</p> <p>Secretary answer machine</p> <p>3 WAY Conference</p> <p>Alarm Announcement</p> <p>Backup battery system for operation with AC power off from 8-10 hours(1).</p> <p>The system should support voice over IP</p> <p>Call Back – on Busy & no Answer</p> <p>Call Forwarding: Internal / External</p> <p>Karona (Cassette With holder 150)</p> <p>programme of recording external and internal callings(Original CD)</p> <p>Installation And Operation</p> <p>Software Training</p> <p>Warranty 3 Year including all spare parts, software & Hardware</p>	Set	1		
Total					

Rehabilitation of Damaged Buildings					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
<u>SUMMARY</u>					
1	Earthworks				
2	Demolish Works				
3	Concrete Works				
4	Building Works				
5	Finishing Works				
6	Plumbing works				
7	Insulation Works				
8	Aluminium and Metal Works				
9	Wooden Works				
10	Furniture Works				
11	Electrical Works				
12	Equipment Works				
-	TOTAL				



UNITED NATIONS DEVELOPMENT PROGRAMME

ITB 2015-121

Development and Rehabilitation of Various Halls

Development and Rehabilitation of Various Halls					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
	<p>General Notes:</p> <p>0-This works shall be implemented in the following buildings: A- Central building (Halls A1-407 + A1-307) B- Scientific colleges administration building (Pharmacy and Science) C- Female students building K1 (Halls K1-401)</p> <p>1- Complete detailed shop drawings should be delivered to the Engineer to take his approval prior the commencement of work. Samples of all materials shall also be delivered to the Engineer to take his approval,</p> <p>2-Contractor shall take into consideration that all – direct and indirect works and their relevant expenses required for proper implementation of the project including temporary facilities, fencing, securing utilities (water, wastewater, telephone and electricity systems) as well as making access to project implementation location away from the one in use by the students and teachers such that the university is running safely without disturbance. The contractor will be accountable for all necessary equipment, materials and activities to assure the safety of people within the university buildings and vicinity, where an approved safety plan will be prerequisite to initiating activities along with installing all required componenets and materials necessary for safety of workers, project team as well as people at university. All relevant costs are deemed to be included in the unit price in addition to the requiried re-instatment works needed to bring the original facilities to its original status before addition of temporary works.</p> <p>3-The contractor will expect that more than one contractor will be carrying out works in the university at the same time, the Contractor is presumed to make all necessary coordination and facilitate accessibility to and other work-related issues</p> <p>4-All works and installations listed here below should be carried out, tested and commissioned by specialized responsible skilled labours in full coordination with the university engineering office , all in accordance with drawings, specifications and relevant standards, and the instruction of the Engineer. The Engineer has the right to reject any component of the work not complying with the specifications and the terms of the contract.</p>				

Development and Rehabilitation of Various Halls					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
1	Concrete Works:				
	<p>Rates of Concrete Works shall include:-</p> <ol style="list-style-type: none"> 1. All form works and shuttering (new lumber for shuttering painted by special oil (fuel or burnt oil is not accepted) in any form, shape and size . Making chamfered and curved edges, allowing for and making grooves and sleeves and using Tie Rods (Batant) for concrete walls ; removal of forms and cleaning of all exposed tie wires and rods. Steel forms must be used in shuttering the external decorations. 2. Supplying, Casting, vibrating and curing as per specifications. 3. Approved additives and admixtures. 4. Developing new Concrete Job Mix Designs, Sampling , testing and providing test results certificates, storing and saving of samples. 5. Painting of exposed surfaces of underground reinforced concrete elements with two coats of hot bituminous paint (75/25) after primer layer , the strokes of each layer to be opposite to each other. 6. Preliminary installations for Electrical, plumbing and floor drainage in floor slabs including final floor slab. 7. Compaction and testing under the foundation, ground beams, ground slabs and Apron. the compaction should not be less than 98% of MDD. 8. All works according to specifications , drawings and supervisor engineer instructions 9. Supply, fabricate and fix reinforcement steel (fy= 410 N/mm2) for all the structural elements according to drawings and engineer's instructions for any grade, size and length as detailed in the drawings, storing on site including cutting, bending and fixing in position and providing all tying wires, spacers, shop drawings, testing and bar bending schedules .All works according to specifications , drawings and supervisor engineer instructions 10. In rehabilitation works, supply fabricate and fix steel dowels to the existing concrete using special materials. In case of lapping with existing steel reinforcement, rates will include cleaning rust and treatment with special materials 11. In case after excavation the new columns locations and relevant footings coincide with the existing ones, the contractor will make modification to adapt implementation to the existing conditions and deemed to include in his rates relevant costs accordingly. <p>All rehabilitation works will include the necessary extra steel reinforcement and concrete to be applied in layers if necessary in addition to the necessary special materials and accessories.</p>				
1.1	Supply and install reinforced concrete B250 for topping of existing block wall, 7cm thick with reinforcement of 8@20cm for both sides. The prices includes removal of existing gypsum boards to approved dump site, abrading the block wall up to 5 cm, to maintain thickness of 7cm, deveopment of steel with the existing columns and beams each 40cm for all sides, casting on stages each 1.5m height according to specifications, drawings and engineer instructions. (central Building A1, Halls 307+407) (Drawing A04)	m ³	15		

Development and Rehabilitation of Various Halls					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
1.2	Ditto but for hall platform edge beam, lintels, sills. The price includes reinforcement development for new lintels with existing columns and beams (4T12) for both sides (for top and bottom reinforcement) with no less than 35cm, reinforcement steel development for hall platform edge beam with slab each 60cm, supply of necessary materials according to the standards and instructions of the supervisor engineer. Halls (307 + 407)	m ³	2		
1.3	Supply and cast reinforced concrete B250 for ground floor, 10cm thick, (horizontal or inclined) with reinforcement of T8/25cm both directions reinforcement. The prices includes fill by clean sand up to new levels, finishing the surface by trowel machine and required materials to complete the work as per specifications, drawings and engineer instructions. (Drawing A05)	m ²	52		
Total					

Development and Rehabilitation of Various Halls					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
2	Finishing Works:				
	<p>A- Plaster works All works must be according to drawings, specification and engineer instructions. Rates shall include :</p> <p>1-Supply of all needed materials, including hot galvanized angles for the corners, windows and external decoration as well as the use of hot galvanized wire mesh between concrete and block work.</p> <p>2-Preparation works by covering all conduits of electricity, water supplies , etc, with a hot galvanized wire mesh at least 20cm width coated by mortar (1:1) cement : sand and the work includes removal of wires and nails and cleaning of surfaces to be ready for plastering.</p> <p>3- Contractor shall take into consideration that all – direct and indirect works and expenses required for the completion of the coming items are included in the unit price.</p> <p>4-Trimming of concrete chippings, removing the wires and etc. and cleaning of existing surfaces to be ready for plastering.</p> <p>5- Checking out all of the preliminary installation in ceilings and walls such as electrical, water supply and waste water pipes and repairing the damages if any.</p> <p>6- Curing with water for at least three days for each coat. This should be done prior to commencement of plastering and after obtaining a written approval from the supervision engineer.</p> <p>B- Tiles works All works must be according to drawings, specification and engineer instructions. Rates shall include :</p> <p>1. Samples for approval and all the required tests.</p> <p>2. Cleaning, mechanical polishing and pointing using grout.</p> <p>3.Insulation works under ceramic floor tiles for all wet areas and kitchens using primer coat, two hot bitumen coats (75/25)</p> <p>4. Plastic angle beads for ceramic wall tiles at the corners and top and sides of ceramic edges.</p> <p>5. Local marble must be Grade (A) free cracks and clay flaws.</p> <p>6. Measuring the stockpiled quantities of tiles and obtaining the engineer approval prior to shipment to the site.</p> <p>7.Transporting and carefully handling the stored quantities to the site.</p> <p>C- Painting works Rates for painting and decorating work shall include for: 1. Preparation of surface including puttying, sealing and priming, 2. Any area or width, 3. Any location, 4. Work in multi colours, 5. Cutting in edges, 6. Any taping and covering to protect areas and others.</p> <p>All the painting materials should be approved and tested by approved local laboratory</p>				
2.1	Supply and install glass block size 19 × 19 × 8 cm by using white cement and quartz the price includes galvaniazied steel tie rods 4mm for both directions/block row according to engineer instructions and specifications. Halls (307 + 407)	m ²	35		

Development and Rehabilitation of Various Halls					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
2.2	Supply and make internal plastering 13 mm thick for ceiling ,walls and soffits. The work includes rough primer nail rendering to form a key with (mix 1:1) cement sand, second layer 13mm: Base-Coat "Rendering" with (1:3:0.25) cement: sand mortar: lime and third layer: Finishing Coat with (1:1:1) cement: sand mortar: lime . The price includes scaffolding, removal all existing finish, all materials needed to finish the works according to specifications , drawings and supervisor engineer instructions. Halls (307 + 407)	m ²	170		
2.3	Supply and paint two coats of putty one primer for velvet and two coats of colored Velvet paint and the price included the maintenance of plaster in damage area, and repairing existing cracks as per specifications, drawings and the engineer instructions.	m ²	900		
2.4	Ditto but (Antica Bear) type	m ²	800		
2.5	Supply & paint two coats of colouerd internal colored emulsion paint (Supercryle) .The works include removing the old paint and plaster repairing, testing, Treatment of cracks including cleaning, rubbing, open, filling with sikaflex, closing openings, repairing plaster in the walls up to (20*20 cm) and cleaning the surface as specification and drawings.	m ²	800		
2.6	Supply and paint one primer and minimum two coats of emulsion paint (Poliside) for ceiling and drop beams and the price included the maintenance of plaster in damage area and repairing existing cracks as per specifications, drawings & the engineer instructions.	m ²	600		
2.7	Supply and cast terrazzo stairs (Marble chips) 34cm wide x 5cm thick x 16cm height, of the same kind and color of the floor tiles including smoothing the surfaces, expansion joints (glass), cement, sand mix 1:3 under the new terrazo, reinforcement steel T8/30cm in both directions (mini. 2 bars / step), removal of the existing to approved dumpsite as specifications and engineer instructions. Note: measurement by horizontal projection only. (Halls (307 + 407)) (Drawing A06)	m ²	25		
2.8	Ditto but for different places.	L.M	60		
2.9	Supply and install Non slipping Porcelain Floor Tiles (full body) size 40cm x 40cm x 8 mm (Spanish Made Class A or equivalent) with color ratio of 1:3. The price include skirting 40cmx10cm x 8mm and removal of the existing tile to approved dump site. all works according to specifications and approved samples. (Halls (307 + 407)) (Drawing A06)	m ²	100		
2.10	Supply and fix color glazed ceramic wall tiles, Type (Plaza) or equivalent, size 20x40x0.60cm for corridors up to 160cm height, (two colors). The price imcludes removal of the existing paints and plaster, lime free key nail then plain plaster layers and pointing using special pre-mixed grout and hardwood (Zaan) crash rails size 70mm x 50mm with round edges, smooth surface, apply one coat of sanding sealer, two coat of approved lazoure paint and one coar of lucker, drill and fix to concrete or block walls using expansion steel bolts as specifications and supervisor engineer instructions	m ²	300		

Development and Rehabilitation of Various Halls					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
2.11	Supply and install of mosaic around door frame, avg. 16cm wide, the exact measurements and colors to be determined by the supervisor engineer, the price includes removal of the existing ceramic, plaster, paint and prepare the surface to apply the mosaic layer. The installing to be completed by adhesive material (bgiebont 21/21) and finishing works as per specification and supervisor engineer instructions.	m ²	30		
2.12	Supply and install Berlato marble 25cm wide x 3cm thick for window sills laid on 2 cm thick mortar bed. The price includes dismantle and refix of the existing windows, removal of debries to approved dump site, any needed manitanence regarding plaster & paint around the windows (internal & external), polishing and grooving of the new sill as approved by engineer and as specifications.	L.M	34		
2.13	Supply and install Granite (Kassar Msaddaf) for hall platform, composite of 6 pieces similar to existing one in Al-Shawwa hall with all required works according to specifications and engineer instructions.	m ²	18		
2.14	Supply and install Berlato marble 3cm thick for door threshold laid on 3 cm thick mortar bed including drip-off angle and emergency staircase as approved by the representative engineer and as specification and drawings and approved samples.	m ²	10		
2.15	Supply and install Gypsum board ceiling (Suspension system) , The price includes hot galvanized metal studs standing frame (each 60*60cm for both sides), bolts, screws, hot galvanized supports, "C" section, angles..etc, and putty and two coats of emulsion paints according to specifications, drawings and engineer instructions. (Drawings A11-A13)	m ²	800		
2.16	Supply and install gypsum cornice 15*15cm. The price includes putty and two coats of acrylic paint (Supercryle), smoothing and required accessories according to specifications, drawings and engineer instructions. (Drawings A11-A13)	L.M	380		
2.17	Ditto but 25*25cm size. (Drawings A11-A13)	L.M	50		
2.18	Supply and install gypsum frame, 3cm wide. The price includes putty and two coats of acrylic paint (Supercryle), smoothing and required accessories according to specifications, drawings and engineer instructions. (Drawings A11-A13)	L.M	400		
Total					

Development and Rehabilitation of Various Halls					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
3 Aluminium & Metal Works:					
	The items include supplying aluminum windows section 7000 matching the existing ones, with min. wall thickness 1.5mm (to be approved by representative engineer) as frame, glass 4 mm thick, ironmongery , accessories and hard ware along with fixing as per specification and drawings. All maintenance works include all needed materials for reinstatement and workmanship. Steel work should be properly treated and prepared, painted with two coats of oil paint,one primer (polyzinc) and one undercoat.The price shall include removing the damaged aluminum and steel works and handing to the the university engineering office				
3.1	Supply & install Mul-T-Lock door type 417 with over all size 98cm width x 210cm height with powder coated paint. The price includes winodw of 30*50cm, two layers of 6mm clear glass, steel rod 10*10mm each 10cm between the two layers, door lock type 235 & Mul-T-Lock serrated cylinder, door stopper and all other fitting, dismantle the existing door and frame, to be delivered to university stores, casting concrete for the new frame (the works also include building blocks, R.C concrete, reinstatement of plaster, ceramic tiles, painting to match the new design). All to be carried out according to the specifications and the engineer instructions. (Drawing A07)	NO.	6		
3.2	Ditto but two leaves 196cm wide	NO.	2		
3.3	Supply and fix steel protection for windows to match existing (K401 building). The price includes painting with one coat of primer, undercoat and at least two coats of oil paint., fixed on walls by steel angle ties and plates, all according to drawing, specification and engineer instructions. (Drawing A08)	m ²	8		
3.4	Supply and install platform for hall of steel profls 40*60*2.2mm, soft wood (Swedish type) 4*4cm each 60cm in both directions, sides and topping of plywood wood 17mm thick, as dper drawings No. A09, the price includes covering the floor and sides of the platform with high quality moquette (Super logo or equivalent), one coat of sanding sealer and two coats of approved lazoure paint for timber works, one primer coat and two coats of oil paint for steel works, alumium angles at edges 30*30*20mm and all accessories as per specification, drawings and engineer instructions. Measurements for horizontal projections only. (Halls A2 + 401 + k1 + 507) (Drawing A09)	m ²	20		
3.5	Ditto but for different elevations in hall (A2-507) according to specifications, drawing, and engineer instructions. (Drawing A10)	m ²	46		
3.6	Supply and fix powder coated color Aluminium window (grade A) equivalent to Klil 7000, complete with frame, sliding leaves , two layers of clear glass, 6mm thick for the external and 4mm thick for the internal. The prices includes fixed partition 4500 type for the upper side 40cm height with two layers of clear glass of 6mm, 4mmt thicks for external and ineternal respectively, ironmongery and hardware and as per specifications and/or the engineer's instructions. (Drawing A08)	m ²	24		

Development and Rehabilitation of Various Halls					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
3.7	Supply and install Aluminium handrail for stairs and ramps with height of 85 cm, the price includes pipes of 5cm Dia., 2.5mm thick and vertical pipes 4cm Dia., 2.5 mm thick, each 70cm, three longitudinal 16mm pipes each 17cm, vertical pipe 6.5cm Dia., 2.5mm thick each 200cm, the works includes fixation by steel rods with special adhesive materials, elbows, clips, stainless steel bolts, all accessories required to complete the job, the price also includes, dismantle the existing steel handrail and deliver to university stores according to specifications, drawings and engineer instructions. (Drawing A08)	m ²	20		
Total					
4 Wooden Works:					
	1- The contractor shall submit shop drawings for all items. 2- The contractor has to take engineer approval for raw materials for the each item (MDF, Plywood, soft and hard wood, locks, brace hinges, stainless steel grade 304, foam 32kg/m ³ , high quality textile and all accessories required) before manufacturing. 3- All wooden works includes painting with high quality paints. 4- Type of cladding works shall be similar to existing in Hany Al-Shawwa hall. 5- Price includes workmanship, transportation and installation. 6- The items include supplying carpentry works from good wood grade "A" including frame cover mould, architrave, sanding sealer, prime coats , at least two coats of oil paint, 15cm Aluminum kick plate 1mm thick from both sides , hard ware, locke type Wally switch or equivalent and brass hinges 10cm height, door stopper and all other fitting according to specification and drawing.				
4.1	Supply and install of MDF wood for wall cladding, 17mm thick covered with beech veneer (Zan), 240cm height, fixed to soft wood rails and stands of 5*5cm for internals and 5*10cm for edges in both directions with no more than 60cm spacing, the price includes CNC engraving, filling the space between rails and stands of rockwool 3cm thick, fixing by hidden screws, any decorations to hide joints, cornices 14mm wide, painting with one coat of sanding sealer, two coat of approved lazoure paint and one coar of lucker, composite panels for openings and any decorations, accessories and materials to complete the job as per specifications, drawings and engineer instructions. (Drawing A14)	m ²	48		
4.2	Ditto but carved decorations including upper and lower cornices of MDF cornices 10cm height for the upper and lower edges of the wall, fixing by wooden wedges and hidden screws and required accessories and materials to complete the job as per specification, drawings and engineer instructions. (Drawing A15)	m ²	120		
4.3	Supply and install of wall cladding MDF wood, 17mm thick, covered of beech veneer (Zan), the price includes cornices, decorations, applying one coat of sanding sealer, two coat of approved lazoure paint and one coar of luckerand and required accessories and materials to complete the job as per specification, drawings and engineer instructions. (Drawing A16)	lump. Sum	2		

Development and Rehabilitation of Various Halls					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
4.4	Supply and install cladding for columns of MDF wood, 17mm thick covered of oak veneer, the price includes fixing on hard wood (Zan), 50*30mm section, CNC engraving from all sides, applying one coat of sanding sealer, two coat of approved lazoure paint and one coar of lucker, all requied accessories and materials to complete the jobs as per specification, drawings and engineer instructions. (Drawing A16)	m ²	36		
4.5	Supply and install frame 120*60cm of carved hard wood (Zan) 70*50mm section, frame back of plywood 17mm, covered of high density foam 32kg/m3, 6mm thick and high quality velour textile with no less than of 20 large size buttons arranged as detemined by engineer and any required accessories and material to complete the job as per specifications, drawings and engineer instructions. (Drawing A17)	NO.	18		
Total					
5 Furniture Works:					
	1- The contractor shall submit shop drawings for all items. 2- The contractor has to take engineer approval for raw materials for the each item (MDF, Plywood, soft and hard wood, locks, brace hinges, stainless steel grade 304, foam 32kg/m3, high quality textile and all accessories required) before manufacturing. 3- The contract shall provide sample after manufactruring for submission. 4- All furniture works includes painting with high quality furniture paints. 5- All steel furniture shall be oven painted. 6- Type of textile shall be similar to existing in Hany Al-Shawwa hall. 7- Price includes workmanship, transportation and installation. 8- All used textile, leather, moquette and carpets must be of brand name.				
5.1	Supply and install theatre chair (Turkish made class "A" or equivalent), high desnity foam 32kg/m3 covered with class "A" textile with movable arms of fiberglass, the price includes any required accessories and materials to complete the job as per specification and engineer instructions. (Drawing A22)	NO.	400		
5.2	Supply and install high quality moquette (Super lugo or equivalent), the price include upper Aluminium angles for upper steps edges 30*30*1.25mm, stainless steel rod 14mm for lower edge, skirting, sticking materials, cleaning and preparation the surface to install the moquette according to specifictions and engineer instructions.	NO.	500		
Total					

Development and Rehabilitation of Various Halls					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
6 Electrical Works:					
	General: *The items in general shall also include conduits, connection boxes, controls, wires, connectors, clamps, bolts, and connecting the cables to switchboards and common electric network are included in the unit price. * Contractor shall submit shop drawings for all electrical works to be approved by the Engineer before executing the work. * As-built drawings shall be submitted after handing over the work. * All the electrical works shall be executed according to Standards, drawings, specifications and supervisor engineer instructions. * Dismantling & Removing old lighting unit (fluorescent light fixture, glops, Etc) and move to university stores as per engineer instructions.				
	The prices of all Electrical works listed below include: • Execution of the works include all fittings and accessories required for installing and operation. • All materials are supplied (such as wires, pipes, electrical equipments ... etc) should be of excellent quality and approved by the supervising engineer. • The work includes maintenance period for each device according to tradition in the field. • Oversees the installation and maintenance, a specialist in the field of devices. • Provide a guarantee for electrical equipments of duration according to tradition in the field. • Contractor shall submit shop drawings for all electrical works to be approved by the Engineer before executing the work. * Dismantling & Removing old lighting unit (fluorescent light fixture, glops, Etc) and move to university stores as per engineer instructions.				
Electrical work for halls					
6.1	Supplying, installing and operating Fluorescent Light Fixture 4x18W for suspended false ceiling (Type is GA'ASH or equivalent) The item includes lamps and starters OSRAM made, electronic ballast, capacitor and all necessary equipments for installation and operation as per drawings, specifications and engineer instructions.	No	125		
6.2	Supplying, installing and operating Spot Light 12 inch diameter, 220V, with 60 watt PL lamps for suspended false ceiling (Type is GA'ASH , Elita or equivalent) The item includes lamps Nepton made, ballast, capacitor and all necessary equipments for installation and operation as per drawings, specifications and engineer instructions.	No	10		
6.3	Ditto but Spot Light 8 inch diameter, 220V, with 32 watt PL lamps for suspended false ceiling (Type is GA'ASH , Elita or equivalent)	No	160		
6.4	Ditto but Spot Light 4 inch diameter, 220V, with 35 or 50 watt Halogen lamps for suspended false ceiling (Type is GA'ASH , Elita or equivalent)	No	120		

Development and Rehabilitation of Various Halls					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
6.5	Supplying, installing and operating Led Strip(tube) Light 230v 60led/m different colours (Type is SIGMA or equivalent) The item includes all necessary equipments for installation and operation as per drawings, specifications and engineer instructions.	L.M	150		
6.6	Supply, install, connect and test high quality single pole one way switch, 220v, 13A, for flush or surface mounted complete with plastic trenches , J. boxes, cables , cover and all necessary accessories according to engineer instructions. (Type is BTICINO MATIX or equivalent)	No	20		
6.7	Ditto but two pole (Type is BTICINO MATIX or equivalent)	No	30		
6.8	Supply, install, connect and test emergency lighting fixture 8w, 90 min duration with self adhesive " EXIT" sign in both English / Arabic languages for ceiling and wall mounting complete with all necessary accessories. (Type is GA'ASH No.580121 or equivalent)	No	5		
6.9	Supplying, testing and erecting communication (computer network) socket outlet RJ45, flush type, including CAT5E cables from the socket to the nearest rack, trenches and all according to the tender documents and engineer instructions. (Type is BTICINO MATIX or equivalent)	No	30		
6.10	Supplying, installing and operating wall mounted Fan 22 inch diameter (Type is CHMC or equivalent) The item includes switch and all necessary equipments for installation and operation as per drawings, specifications and engineer instructions.	No	16		
6.11	Ditto but wall mounted Fan 25 inch (Type is CHMC or equivalent)	No	16		
6.12	Supply, install, connect and test 138W LED type external flood lighting fixture IP66 .The item includes Bracket Kit , cables, conduits, j. boxes and fixing screws and all necessary equipments for installation and operation as per drawings, specifications and engineer instructions. (Type is GEWISS No. SMART(4) HB 5+5L or equivalent)	No	10		
6.13	Supply and installat external lighting control unit including contractor (DILL 00M), selector switch 10A, photocell (KAJA type), 24 hours timer, MCBS 10A . (Type is Moeller or equivalent).	Set	1		
6.14	Supply and installation of cabin Rack size 8U forNetwork: - Cat 5 24 port patch panel includes Plug and punctuation - Cisco Switch Number 1 includes plug and cables Patch Cable. - 2 suction fan "number one ride in the roof of the cabin - Electricity distributor with six sockets with current 20 A breaker - UPS number one 1KW capacity with batteries and plug type ABC Smart	No	3		
6.15	Supplying and installing cable type FTP TELDOR CAT 5 direct line from main network rack to the sub racks the work includes PVC pipes and boxes .The item includes all necessary equipments for installation and operation as per drawings, specifications and engineer instructions.	No	60		
6.16	Supplying and installing Box (Type is GEWISS # PT48).	No	6		

Development and Rehabilitation of Various Halls					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
6.17	Supply and install electrical switch board of size 60x40x20 cm , two doors, the frame work is made of hot galvanized steel sheets 2mm thickness, painted by antistatic and insulation paint type is MOLLER or equivalent with high degree of protection	No	2		
6.18	Ditto but PVC dist-board 24CB capacity, (Type is GEWISS or equivalent)	No	4		
	Supply and install the followings breakers:				
6.19	Miniature Circuit Breaker MCB 3X63A. (Type is Moeller or equivalent).	No	2		
6.20	Ditto butr MCB 3X50A. (Type is Moeller or equivalent).	No	2		
6.21	Ditto butr MCB 3X32A. (Type is Moeller or equivalent).	No	4		
6.22	Ditto butr MCB 3X25A. (Type is Moeller or equivalent).	No	4		
6.23	Ditto butr MCB 3X16A. (Type is Moeller or equivalent).	No	4		
6.24	Ditto butr MCB 2X25A. (Type is Moeller or equivalent).	No	10		
6.25	Ditto butr MCB 1X16A. (Type is Moeller or equivalent).	No	26		
6.26	Ditto butr MCB 1X10A. (Type is Moeller or equivalent).	No	32		
6.27	Residual current circuit breaker RCB 4X40/0.3A. (Type is Moeller or equivalent).	No	2		
6.28	Ditto but residual current circuit breaker RCB 4X25/0.3A. (Type is Moeller or equivalent).	No	4		
6.29	3 indication lamps R S T with resistance 220V,with LTL fuse3x36/6A	SET	1		
	Supply and install the following cables The price includes 2" PVC pipe and all necessary equipments for installation and operation and any civil works including dismantling and removing any tailes and prepare any damages as per drawings, specifications and engineer instructions.				
6.30	XLPE CU cable 5x10 mm2	MR	60		
6.31	XLPE CU cable 5x6 mm2	MR	120		
6.32	Supplying, laying and connecting low voltage cable CU XLPE 3x185+95 from the main Feeder to the Existing ATS . The price include dismantling and removing the existing cable.	L M	130		
6.33	<u>Old Electrical works</u> Dismantling and removeing old electrical materials that need to enlarge such (MCCB'S , Contactors , Power and Control Cables,...etc) in the existing ATS panel and handing over in good condition to engineering and maintenance Department as per engineer demand, The item includes rearranging the remaining components of the ATS panel and any required maintenance or any required materials in order to operate the system .	L.S.	1		
	<u>Modification and replacment in the existing ATS electrical board</u> Supply, install, test and commission the following circuit breakers in the existing electrical panels (Type is moeller or eq.) including busbar & wires depending on new circuit breakers range from the main busbar, the existing electrical board must be rearranged and labeled According to specifications, instructions and demands of the supervisor engineer				
6.34	Molded case circuit breaker with (over load protection) MCCB. (Type is MOELLER NZMN2-400 or equivalent).	No.	2		

Development and Rehabilitation of Various Halls					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
6.35	Supply and install 3 phase mains/generator automatic change over switch consist of 2 contactors 4 poles DILMP-400A,400V , with electrical and mechanical inter-lock ,the work includes automatic changeover control unit (ACU) with all required Timers,Relays,adjustable under voltage Relay and all protection devices to complete the work as per the engineer instructions . (Type is MOELLER or equivalent).	No.	1		
PUBLIC ADDRESS (SOUND) SYSTEM					
	Supply ,Install,Connect,and Test the Following Item Below The contractor shall, when pricing of the following electrical bills take into consideration all requirements to finish work complete with all accessories, all equipment items for the loudspeaker, Mixer,... shall be manufactured by RCF,Electro-Voice, or equivalent. Work is to include the supply of the equipment specified installation of ,connection, wiring ,commissioning,Transportation,testing, and all other details ,the prices including all connectors,adapters,plugs.All the requirements according to Specifications, drawings, and Engineers instructions.				
6.36	Supplying, installing and operating Amplifier as per drawings ,engineer instructions with all required cables , junction boxes conduits and all necessary accessorieand the following specifications: PEAVEY#2600 or Equivalent Power Amplifier 2x500 W, 100V <ul style="list-style-type: none"> • 2- Zone Amplifier, • CLASS-D • 1 Mic input ,1 Aux input • Compact and lightweight form factor • Independent SMPS (switching-mode power supply) for each channel • Balanced input Euroblock connection with link and looping • 2 position LOW CUT FILTER, at 65Hz, and 400Hz • Low power consumption, low heat dissipation and light weight • High power PA amplifier, 500W x 2 at 8 ohm. • THD less than 0.03% • S/N. greater than 100dB 	No	10		
6.37	Ditto but Powered Mixer Console with 8 chanels , (Type is PEAVEY or equivalent)	No.	10		
6.38	Ditto but Equalizer Dual channel (15 bands per channel),low-noise, low-distortion design , (Type is PEAVEY or equivalent)	No.	10		
6.39	Supplying, installing and operating microphone desk stand including Vocal Microphone with high level of sensitivity, Pushbuttons for momentary and latching microphone actions, 15-meter cable for amplifier connection with 5-pin DIN connector. (Type is SHURE # SM58 or equivalent)	Set	10		
6.40	Supplying, installing and operating ceiling mounted loud speaker 8" inch Diam. including all required cables , junction boxes conduits and, metal front protection mesh, clips for quick attachment , line transformer all necessary accessories (Type is PEAVEY or COTINA or equivalent)	No.	40		
6.41	Supplying, installing and operating wirless Vocal Microphone as per specifications and engineer instructions. (Type is SHURE # SM58 or equivalent)	No.	10		

Development and Rehabilitation of Various Halls					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
6.42	Supplying and installing Aluminum Rack With Lock and two doors to putting mixer and transmitter mic.with power point and strip	No.	10		
6.43	Supplying, installing and operating transformer ,100 volts as a protection to the loud speakers.	No.	10		
Safety and Security Works					
	Supply, install and commissioning fire alarm system as per drawings including fire resist PVC pipes, pull boxes special wires including:				
6.44	Fire alarm control panel 4 zones complete with batteries and all necessary accessories.(Type is TELEFIRE or equivalent).	No.	2		
6.45	Supply and install Lionization smoke detector, the detectors shall be twin-chamber with latching electronic circuitry, two wire connection.(Type is TELEFIRE or equivalent).	No.	12		
6.46	Ditto, but heat detector..(Type is TELEFIRE or equivalent).	No.	2		
6.47	Supply and install break glass cal point as per drawings the unit shall be standard type for interior use with key operated test facility, with plastic coated glass. .(Type is TELEFIRE or equivalent).	No.	6		
6.48	Supply and install 95 db electronic horn ultra sound for indoor and outdoor used. (Type is TELEFIRE or equivalent).	No.	8		
	Supply and install fire extinguishers to be replaced as per engineering instruction				
6.49	Co2 Fire extinguishers with acapacity of 6Kg.(Type is Lahavote oe equivalent).	No.	6		
6.50	Powder Fire extinguishers with acapacity of 6Kg.(Type is Lahavote oe equivalent).	No.	15		
HAVC Works:-					
6.51	Supply, install, test and commission Ducted Central Split Air Condition Unit(heat pump) .for HALLS in CENTRAL BUILDING in 3rd & 4th floor (Type is York , ELECTRA or equivalent) . filled with environment friendly refrigerant such as (R410, R407c,..) composed of out door unit. COP should not be less than 3.5, with mixing box, Well supported on hot galvanized steel base 30*30*3 mm on the walls or the roof, indoor unit roof mounted as indicated on drawings to be tights installed completed with all necessary supports, hangers, drain pipes from indoor unit to the nearest floor drain (PVC Ø 1"), cupper pipes, sleeves, thermostat, with fresh air, humidity controlling,Wired Remote control with Digital Display and Function buttons, include Isolation Switch 3x20A MOELLER,aluminum foil and all related work and all required electrical power cables according to drawings and engineers approval, the price must include HEPA filter(99.999% U15) . GR01 CAPACITY : 60,000 BTU/HR, 1125 CFM WITH 290 CFM	No.	6		

Development and Rehabilitation of Various Halls					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
6.52	Supply , install, test and commission air conditioning Heat Pump Split Unit, composed of out door unit. filled with environment friendly refrigerant such as (R410, R407c,..) and COP not less than 3.5, Well supported on hot galvanized steel base on the roof, indoor unit with plasma filter as indicated on drawings to be tights installed completed with all necessary supports, hangers, drain pipes from indoor unit to the nearest floor drain, (PVC Ø 1"), cupper pipes , sleeves, thermostat , and all required electrical cables according to drawings and engineers approval. CAPACITY : (30000 BTU/HR). (Type is York , ELECTRA or equivalent) . □	No.	6		
6.53	Supply, install, test, and commision insulated hot galvanized sheet ducts (min. thick : 0.7 mm), with a proper gages as specified by SMACNA for Supply, Return, including 2" rock wool (thermal insulation thickness of 5 cm) 24kg/m3 all accessories, hot galvanized ' L' angle hangers (2x40x40), with 10mm rods, bolts, flexible connector, with duct liner for at least 3m length from unit, and with aluminum foil, to be connected to the DSU units , Price should include opposite volume damper, and all the requirements according to SMACNA and other relevant international standards, drawings, and Engineers instructions.	M2	60		
	Supply, Install, Test & Commision Four ways Air Diffuser of white coated aluminum ceiling mounted, Price includes all flexible ducts needed, hot galvanized sheet metal connection box, Plenum box connection to ducts with adapter if required and sealant using as per Drawings Specifications and engineering approval as the following sizes.				
6.54	Sizs 350*350mm	No.	12		
6.55	Ditto But Return Grill Sizs 600*600mm	No.	6		
Total					
7 Solar System Works:					
Electrical works for PV Solar System					
MAIN DISTRIBUTION BORD (MDB)					
7.1	Supply, install and commission main distribution panel board (MDB) size (160x100x30 cm) , one door,as specified and as shown on drawings, factory assembled wired and tested in accordance with international standards, including 2mm hot galvanized steel frame with antistatic paint, including busbars (160 A) ,neutral bus bar and earthing terminal ,and all necessary civil works for foundations,cable trenches and handing over clean, tested and in operating conditions as specifications. (Type is MOELLER or equivalent)	NO	1		
7.2	Supply and installation of a manual changeover switch (MTS) 4X40 AMB for plug-and-play between the inverter and the main AC source as drawings and instructions of the supervising engineer ,(Type is Hager or equivalent).	NO	1		
7.3	Supply and install surge arrestor protection at the incoming feeder 3- phase 40KA including connection to the ground with flexible 25 mm2 yellow/green cable. The system shall protect the switch panel against the lightning shocks. (Type Furse or equivalent).	No.	1		
7.4	Supply and install LTL fuses 3x63A/100A, (JEAN MUELLER or equivalent)	Set	1		

Development and Rehabilitation of Various Halls					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
7.5	Mulded Case Circuit Breaker MCCB 3X63A/NZMB-63A. (Type is Moeller or equivalent).	NO	1		
7.6	Miniature Circuit Breaker MCB 3X63A. (Type is Moeller or equivalent).	NO	1		
7.7	Miniature Circuit Breaker MCB 3X50A. (Type is Moeller or equivalent).	NO	2		
7.8	Miniature Circuit Breaker MCB 3X40A. (Type is Moeller or equivalent).	NO	2		
7.9	AC switch disconnecter 3X(32A/50A). (Type is Moeller or equivalent).	NO	3		
7.10	Miniature Circuit Breaker MCB 3X25A. (Type is Moeller or equivalent).	NO	10		
7.11	Ditto but residual current circuit breaker RCB 4X40/0.03A. (Type is Moeller or equivalent).	NO	1		
7.12	Ditto but MCB 2X25A. (Type is Moeller or equivalent).	NO	3		
Sub-Distribution Boards (SDB)					
7.13	Ditto but PVC Sub distribution-board 24 CB capacity OUTDOOR IP65, (Type is HAGAR or equivalent)	NO	6		
7.14	Ditto but Sub distribution-board 36 CB capacity OUTDOOR IP65, (Type is HAGAR or equivalent)	NO	1		
7.15	Ditto but MCB 3X16A. (Type is Moeller or equivalent).	NO	10		
7.16	Ditto but MCB 2X10A. (Type is Moeller or equivalent).	NO	30		
7.17	Ditto but residual current circuit breaker RCB 4X25/0.3A. (Type is Moeller or equivalent).	NO	5		
7.18	Supply and install Contactor 4 poles,220V, with auxiliary contacts,220V coil, AC3 category (Type is MOELLER DILMP32-10 or equivalent).	No.	16		
7.19	Supply and install Time delay electronic relay, with one N.O. and one N.C. 10A output contacts, and 2 sensor input points, supply voltage 24V dc and/or 230V ac, according to specifications and engineer's instructions.(Type is KRK or equivalent).	No.	8		
7.20	Supply and install Control relay, with N.O. and N.C. 10A output contacts, supply voltage 24V dc and/or 230V ac, according to specifications and engineer's instructions.(Type is Finder or equivalent).	No.	8		
Cables and conduits					
	supplying, connecting, and termination of the following XLPE CU cables with all required electrical and civil works, the item includes dismantling and re install the existing cables and laying under ground PVC piping system, manholes, excavation, warning tapes, backfilling and all required civil works to finish the work according specifications and demands of the supervising engineer, to connect cables terminals from source to destination. The work will include re distribution of all existing loads of the main panel to achive the balance of each phase. According to drawings, specifications, instructions, and demands of the supervising engineer. as follow:				
7.21	N2XY-XLPE cable 5*16 mm2	MR	120		
7.22	N2XY-XLPE cable 5*10 mm2	MR	200		
7.23	Flexible Single core copper wire isolated with pvc size 4mm2	MR	50		
7.24	N2XY-XLPE cable 5*6 mm2	MR	200		

Development and Rehabilitation of Various Halls					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
	PV solar system components				
	<p>The system is designed to cover the lighting loads in Al Azhar University Buildings. The system will be grid interactive connected system, which will allow for many power sources options.</p> <p>The system will import from the grid when loads are being more than the generated from PV and supply surplus electricity to the batteries when PV generates more than the loads, the batteries can be charged from Grid if PV output is not enough for loads and batteries.</p> <ul style="list-style-type: none"> • Contractor shall submit shop drawings of all electrical ,civil and solar photovoltaic complete system works,including a single line diagram showing all the components of the PV system, DC and AC distribution boards, PV panels lay out and backup systems and wires cross section for all the system to be approved by the Engineer before executing the work. As well as the catalogs of each component showing the requested specifications stated at the bill of quantity. • As-built drawings shall be submitted after handing over the work. • All junction boxes and DBs will be lockable type. • Upon completion of the installation, the contractor shall organize an on site training program involving nominated employer's staff. Such a program shall be carried out during the commissioning phase. The cost of the training shall be deemed to have been included in the tendered rates. • The price includes all builders' works, making good and reinstatement including necessary materials and workmanship as well as removal of unwanted materials to dump sites approved by the engineer 				

Development and Rehabilitation of Various Halls					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
7.25	<p><u>PV Modules – 26 KWp:</u> Supply, install, connect and operate Mono Crystalline Photovoltaic Solar Modules with all mounting structure and other material needed to have complete job ready for installing high quality PV modules with total arrays capacity 26 KWp. (Type is Canadian Solar or equivalent), the Item Includes supply, install & connect the following:</p> <ul style="list-style-type: none"> • Water proof PV junction boxes IP65(combiner) for each array including DC Fuses, DC switch disconnectors, bus bars ,terminals, ducts, supports & labels suitable to the PV arrays loads. • Solar DC cables appropriately sized to connect the PV solar cells together and to the J.B and from J.B to the inverter to have a complete operational circuit with all conduits, clamps , trays and cable end terminations which shall be DC plug and socket connectors . <p>The DC cables must be sized in accordance with the installation requirements applicable on site, the allowable voltage drop for DC cables between PV Arrays and inverter less than 3%.</p> <ul style="list-style-type: none"> • The number of panels based on 250 Wp for each solar panel. <p>The contractor should provide certified panel characteristics, shop test performance curves, spare parts regular (as recommended by manufacturer), maintenance catalogues and manufacturers warrantee for each solar panel for a period not less than 20 years.</p> <p>The Manufacture testing certificate should be provided for the PV panels and the contractor will provide the necessary arrangements for inspecting of the supervision team of the panels before transporting to Gaza.</p> <p>All works and materials must be according to the drawings, specifications and supervisor engineer instruction's and approval.</p>	Module	104		

Development and Rehabilitation of Various Halls					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
7.26	<p><u>Inverter – 15 KW:</u> Supply, install, connect and operate DC/Ac grid tie inverter 3-phase 15 KW with data communication unit with Ethernet connection . Type is (SMA or equivalent) with minimum 2 MPP inputs, efficiency 98% and suited to any PV module configuration, the inverter depending on the system design and installation proposed and for the future extended. The DC max power input rating should be equal 15 kWp of the PV modules capacity at standard test condition (STC).</p> <p>The inverter unit shall be suitable for indoor and outdoor installations with IP65.The rated AC output power should be 15 kW compatible with the AC loads design.</p> <p>The inverter must include the safety concepts such as (triple protection with optiprotect, electronic string fuse, self-learning string failure detection, DC surge arrestor) to ensure max availability. The price includes :</p> <p>* Supply ,install and connect Sunny WEBBOX for the PV system installedall compatible with the inverter,Bluetooth &Wireless Technology ,with all data cables and connection needed to complete the job.</p> <p>* Supply ,install and connect all DC cables appropriately sized in accordance with the installation requirements and to connect the inverter with PV system designed with all conduits, clamps, trays and cable terminations end which shall be DC plug and socket connectors and workmanship needed to have a complete job, the allowable voltage drop for DC cables between inverter and PV system less than 3%.</p> <p>The contractor should provide certified characteristics, shop test performance curves, spare parts regular (as recommended by manufacturer), maintenance catalogues and manufacturers warrantee for inverter for a period not less than 10 years.</p> <p>The Manufacture testing certificate should be provided for the inverter and the contractor will provide the necessary arrangements for inspecting of the supervision team of the panels before transporting to Gaza.</p> <p>All works and materials must be according to the drawings, catalogues, specifications and supervisor engineer instruction's and approval.</p>	No.	2		

Development and Rehabilitation of Various Halls					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
7.27	<p><u>Battery Inverter – 5 KW:</u> Supply, install, connect and operate DC/Ac Battery Inverter 5kW nominal capacity compatible with on-grid, 1 & 3 phase system and connectable in parallel and modularly extendable. (Type is SMA or equivalent). The Battery Inverter must include the following concepts such as (Ac and DC coupling, High efficiency, intelligent battery management for maximum battery life, charge level calculation, extreme overload capability, and battery temperature sensing and battery current measurements). The rated AC output power should be 5 kW compatible with the AC loads design, and the maximum input AC power from the grid 26 kW .The price includes: * Supply ,install and connect Remote Control Unit for the PV system installedall SMA /SRC-20 with all data cables and connection needed to complete the job. *Supply ,install and connect DC cables appropriately sized in accordance with the installation requirements to connect the Backup unit with DC battery fuses box with all conduits, clamps, trays and cable terminations end which shall be DC plug and socket connectors and workmanship needed to have a complete job, the allowable voltage drop for DC cables between battery inverter and batteries less than 3%.</p> <p>The contractor should provide certified characteristics, shop test performance curves, spare parts regular (as recommended by manufacturer , maintenance catalogues and manufacturers warrantee for each inverter for a period not less than 10 years.</p> <p>The Manufacture testing certificate should be provided for the inverter and the contractor will provide the necessary arrangements for inspecting of the supervision team of the panels before transporting to Gaza.</p> <p>All works and materials must be according to the drawings, catalogues, specifications and supervisor engineer instruction's and approval.</p>	No.	6		

Development and Rehabilitation of Various Halls					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
7.28	<p><u>Battery Bank:</u> Supply, install, connect and operate (VRLA) or (AGM) deep cycle Batteries with a 12-volt dc, the demand energy is 57 kWh per day, the total capacity of battery bank must include 60 % DOD @ C10. The battery bank voltage is 48 Vdc.</p> <p>Type is (Deka or equivalent).The battery must provide high-quality and achieving superior performance, the manufacturing date must be new and not more than 6 months, suitable for each type of applications specially for solar renewable energy, designed Service Life 10 years with low internal resistance, designed to be deeply discharged and recharged hundreds of times.</p> <p>The Battery should provide benefits of being maintenance free, case flame retardant & non-hazardous. The Item Includes supply, install &connect the following:</p> <ul style="list-style-type: none"> • All necessary DC cables between the batteries together and to the battery fuse box to have a complete operational circuit with all conduits, clamps, stainless steel bolts, washers and cable end terminations needed to fix, all DC cables must be sized in accordance with the installation requirements applicable on site ,the allowable voltage drop must be less than 3%. • Battery mounting structure from hot hot galvanized steel stand with shelves and dividers for hosting the batteries and all other material needed to have a complete job ready . • Complete earth system for neutrals including (electrodes 15mm2, manhole with iron cover, earth joints, clamps, conduits and 50 mm2 flexible copper wire from the neutral bus bar in the battery fuse box to the electrode. All precaution to have the resistance < 2Ω. • The number of batteries based on 210 amp-hours of capacity for each one. <p>The contractor should provide certified characteristics, shop test performance curves, spare parts regular (as recommended by manufacturer , maintenance catalogues and manufacturers warrantee for each inverter for a period not less than 10 years.</p> <p>The Manufacture testing certificate should be provided for the inverter and the contractor will provide the necessary arrangements for inspecting of the supervision team of the panels before transporting to Gaza.</p> <p>All works and materials must be according to the drawings, catalogues, specifications and supervisor engineer instruction's and approval.</p>	No.	40		

Development and Rehabilitation of Various Halls					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
7.29	<p><u>PV Mounting structure:</u> Supply and install Module mounting structure from hot hot galvanized steel foundation profile suitable to the dimension of selected PV modules and PV numbers, the mounting provides a fixed inclination of the modules from 30 degree to 32 degree with vertical supports, plates, screws and casting concrete foundations B250 (0.4*0.4*0.2) m3 for each leg, the structure profile includes bracing and double hot hot galvanized angles for dividers. The mounting structure components are bonded together to guarantee potential equalization.</p> <p>The price includes supply and install a complete earth system (electrodes 15mm², manhole with iron cover, earth joints, clamps and 25 mm² flexible copper cable from the structure to the electrode, all necessary copper wires to connect arrays and modules in one loop for earthen.</p> <p>All precaution to have the resistance < 2Ω.</p> <p>All works and materials must be according to drawings, specifications and supervisor instructions and approval.</p>	L.S	1		
7.31	<p><u>Battery Fuse Box:</u> Supply, install, connect and operate battery DC fuse box (500*375*225 mm) as an external DC distributor to protect the battery connections of the inverters .</p> <p>Type is (SMA or equivalent), the box must be water proof protection with IP65, simple wall mounting, suitable connections for three battery inverters and up to six DC connections inlet on the battery side, the item includes (2 LTL 250/400A , 6 fuses 250A , cable glands, with all necessary DC cables from the battery bank and to the fuse box and from the fuse box to the battery inverters to have a complete operational circuit with all conduits, clamps, stainless steel bolts, washers and cable end terminations needed to fix, all DC cables must be sized in accordance with the installation requirements applicable on site ,the allowable voltage drop must be less than 3%.</p> <p>The contractor should provide certified characteristics, shop test performance curves, spare parts regular (as recommended by manufacturer , maintenance catalogues and manufacturers warrantee for battery fuse box for a period not less than 3 years.</p> <p>The Manufacture testing certificate should be provided also.</p> <p>All works and materials must be according to the drawings, catalogues, specifications and supervisor engineer instruction's and approval.</p>	No	1		
7.32	<p><u>Wall mounted exhaust:</u> Supply, install, connect and operate wall mounted exhaust fan of 8" diameter Capacity (250 cfm) type is (VENTA or equivalent) at static pressure 60 Pascal for the battery room , to be tightly installed complete with all necessary supports, and all required electrical cables, conduits, mcb 10A and needed to fix, all according engineer's approval.</p> <p>The price shall include opening duct in the block for the fan, plastering, painting, repair all damages and all other materials needed to have a complete job ready according to the engineer's instruction and approval.</p>	No	1		

Development and Rehabilitation of Various Halls					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
7.33	<u>3-Phase Digital KWH Meter:</u> Supply,install,connect and operate 3-phase digital KWH meter, 3*32 A (ISKRA or equivalent) with all other material needed to have a complete job ,The kWh meter has a digital interface for monitoring by the Remote Monitoring System . All works and materials must be according to the drawings, catalogues, specifications and supervisor engineer instruction's and approval.	No	3		
Total					
8 Equipment Works:					
8.1	Supply, install, commision of smart board interactive white board (Rio Touch type or equivalent), 102", active diagonal 16:10/97.6, frame diagonal 102, active size 209.9*132cm, frame size 216*140cm, packing size 13*155.3*231.5, resolution 4000*4000, cermaics surface and required accessories and material to complete job as per specification and engineer instructions.	NO.	7		
Total					

<u>SUMMARY</u>		
1	Concrete Works	
2	Finishing Works	
3	Aluminium and Metal Works	
4	Wooden Works	
5	Furniture Works	
6	Electrical Works	
7	Solar System Works	
8	Equipment works	
-	TOTAL	



UNITED NATIONS DEVELOPMENT PROGRAMME

ITB 2015-121

Development of Conference Halls in K3 Buiding (The First Floor)

Development of Conference Halls in K3 Buiding (The First Floor)					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
	<p>General Notes:</p> <p>1- Complete detailed shop drawings should be delivered to the Engineer to take his approval prior the commencement of work. Samples of all materials shall also be delivered to the Engineer to take his approval.</p> <p>2-Contractor shall take into consideration that all – direct and indirect works and their relevant expenses required for proper implementation of the project including temporary facilities, fencing, securing utilities (water, wastewater, telephone and electricity systems) as well as making access to project implementation location away from the one in use by the students and teachers such that the university is running safely without disturbance. The contractor will be accountable for all necessary equipment, materials and activities to assure the safety of people within the university buildings and vicinity, where an approved safety plan will be prerequisite to initiating activities along with installing all required componenets and materials necessary for safety of workers, project team as well as people at university. All relevant costs are deemed to be included in the unit price in addition to the requiried re-instatment works needed to bring the original facilities to its original status before addition of temporary works.</p> <p>3-The contractor will expect that more than one contractor will be carrying out works in the university at the same time, the Contractor is presumed to make all necessary coordination and facilitate accessibility to and other work-related issues</p> <p>4-All works and installations listed here below should be carried out, tested and commissioned by specialized responsible skilled labours in full coordination with the university engineering office , all in accordance with drawings, specifications and relevant standards, and the instruction of the Engineer. The Engineer has the right to reject any component of the work not complying with the specifications and the terms of the contract.</p>				

Development of Conference Halls in K3 Buiding (The First Floor)					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
1 Concrete Works:					
	<p>Rates of Concrete Works shall include:-</p> <ol style="list-style-type: none"> 1. All form works and shuttering (new lumber for shuttering painted by special oil (fuel or burnt oil is not accepted) in any form, shape and size . Making chamfered and curved edges, allowing for and making grooves and sleeves and using Tie Rods (Batant) for concrete walls ; removal of forms and cleaning of all exposed tie wires and rods. Steel forms must be used in shuttering the external decorations. 2. Supplying, Casting, vibrating and curing as per specifications. 3. Approved additives and admixtures. 4. Developing new Concrete Job Mix Designs, Sampling , testing and providing test results certificates, storing and saving of samples. 5. Painting of exposed surfaces of underground reinforced concrete elements with two coats of hot bituminous paint (75/25) after primer layer , the strokes of each layer to be opposite to each other. 6. Preliminary installations for Electrical, plumbing and floor drainage in floor slabs including final floor slab. 7. Compaction and testing under the foundation, ground beams, ground slabs and Apron. the compaction should not be less than 98% of MDD. 8. All works according to specifications , drawings and supervisor engineer instructions 9. Supply, fabricate and fix reinforcement steel (fy= 410 N/mm2) for all the structural elements according to drawings and engineer's instructions for any grade, size and length as detailed in the drawings, storing on site including cutting, bending and fixing in position and providing all tying wires, spacers, shop drawings, testing and bar bending schedules .All works according to specifications , drawings and supervisor engineer instructions 10. In rehabilitation works, supply fabricate and fix steel dowels to the existing concrete using special materials. In case of lapping with existing steel reinforcement, rates will include cleaning rust and treatment with special materials 11. In case after excavation the new columns locations and relevant footings coincide with the existing ones, the contractor will make modification to adapt implementation to the existing conditions and deemed to include in his rates relevant costs accordingly. <p>All rehabilitation works will include the necessary extra steel reinforcement and concrete to be applied in layers if necessary in addition to the necessary special materials and accessories.</p>				
1.1	Supply and cast reinforced concrete B250 for gound floor, 10cm thick, with reinforcement mesh of T8/25cm. The prices includes dismantle and removal of existing tiles to approved dump site, fill of clean sand up to new levels, finishing the surface by trowel machine and required materials to complete the work as per specifications, drawings and engineer instructions. (Drawing A3)	m ²	26		

Development of Conference Halls in K3 Buiding (The First Floor)					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
1.2	Ditto but including supply and distribute of hollow black 40*20*20cm to maintain the level of the ground floor, reinforced tie beams each 1.20m in both directions, steel development and required materials to complete the work as per specifications, drawings and engineer instructions. (Drawing A3)	m ²	21		
1.3	Ditto but including supply and distribute two layers of hollow blocks, 40*20*20cm for bottom layer, 40*20*15cm for the top to maintain the level of the ground floor, reinforced tie beams each 1.20m in both directions, steel development and required materials to complete the work as per specifications, drawings and engineer instructions. (Drawing A3)	m ²	35		
Total					

Development of Conference Halls in K3 Buiding (The First Floor)					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
2 Finishing Works:					
	<p>A- Plaster works All works must be according to drawings, specification and engineer instructions. Rates shall include :</p> <p>1-Supply of all needed materials, including hot galvanized angles for the corners, windows and external decoration as well as the use of hot galvanized wire mesh between concrete and block work.</p> <p>2-Preparation works by covering all conduits of electricity, water supplies , etc, with a hot galvanized wire mesh at least 20cm width coated by mortar (1:1) cement : sand and the work includes removal of wires and nails and cleaning of surfaces to be ready for plastering.</p> <p>3- Contractor shall take into consideration that all – direct and indirect works and expenses required for the completion of the coming items are included in the unit price.</p> <p>4-Trimming of concrete chippings, removing the wires and etc. and cleaning of existing surfaces to be ready for plastering.</p> <p>5- Checking out all of the preliminary installation in ceilings and walls such as electrical, water supply and waste water pipes and repairing the damages if any.</p> <p>6- Curing with water for at least three days for each coat.</p> <p>This should be done prior to commencement of plastering and after obtaining a written approval from the supervision engineer.</p> <p>B- Tiles works All works must be according to drawings, specification and engineer instructions. Rates shall include :</p> <p>1. Samples for approval and all the required tests.</p> <p>2. Cleaning, mechanical polishing and pointing using grout.</p> <p>3.Insulation works under ceramic floor tiles for all wet areas and kitchens using primer coat, two hot bitumen coats (75/25)</p> <p>4. Plastic angle beads for ceramic wall tiles at the corners and top and sides of ceramic edges.</p> <p>5. Local marble must be Grade (A) free cracks and clay flaws.</p> <p>6. Measuring the stockpiled quantities of tiles and obtaining the engineer approval prior to shipment to the site.</p> <p>7.Transporting and carefully handling the stored quantities to the site.</p> <p>C- Painting works Rates for painting and decorating work shall include for:</p> <p>1. Preparation of surface including puttying, sealing and priming,</p> <p>2. Any area or width,</p> <p>3. Any location,</p> <p>4. Work in multi colours,</p> <p>5. Cutting in edges,</p> <p>6. Any taping and covering to protect areas and others.</p> <p>All the painting materials should be approved and tested by approved local laboratory</p>				
2.1	Supply and paint two coats of putty one primer for stucco and two coats of colored Stucco paint and the price includes removal of the existing paint, maintenance of plaster in damage area, and repairing existing cracks as per specifications, drawings and the engineer instructions.	m ²	180		
2.2	Ditto but Antica bear	m ²	150		

Development of Conference Halls in K3 Buiding (The First Floor)					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
2.3	Supply & paint two coats of colouerd internal colored emulsion paint (Supercryle) for walls .The works include removing the old paint and plaster repairing, testing, Treatment of cracks including cleaning, rubbing, open, filling with sikaflex, closing openings, repairing plaster in the walls up to (20*20 cm) and cleaning the surface as specification and drawings.	m ²	260		
2.4	Ditto but for ceiling inclduing gypsum cornices, frames.	m ²	130		
2.5	Supply and fix color glazed ceramic wall tiles, Type (Plaza) or equivalent, size 20x60x0.60cm for corridors up to 160cm height, (two colors). The price imcludes removal of the existing paints and plaster, lime free key nail then plain plaster layers and pointing using special pre-mixed grout and hardwood (Zaan) crash rails size 70mm x 50mm with round edges, smooth surface, apply one coat of sanding sealer, two coat of approved lazoure paint and one coar of lucker, drill and fix to concrete or block walls using expansion steel bolts as specifications and supervisor engineer instructions	m ²	40		
2.6	Supply and install of mosaic around door frame, avg. 16cm wide, the exact measurements and colors to be determined by the supervisor engineer, the price includes removal of the existing ceramic, plaster, paint and prepare the surface to apply the mosaic layer. The installing to be completed by adhesive material (bgiebont 21/21) and finishing works as per specification and supervisor engineer instructions.	m ²	8		
2.7	Supply and install Berlato marble 3cm thick, 25cm wide for door threshold laid on 3 cm thick mortar bed. The price includes drip-off angle and emergency staircase as approved by the representative engineer and as specification and drawings and approved samples.	L.M.	20		
2.8	Ditto but 23cm wide x 3cm thick for window sills laid on 2 cm thick mortar bed. The price includes dismantle and refix of the existing windows, removal of debries to approved dump site, any needed manitanence regarding plaster & paint around the windows (internal & external), polishing and grooving of the new sill as approved by engineer and as specifications.	L.M.	35		
2.9	Supply and install Gypsum board ceiling (Suspension system), The price includes hot galvanized metal studs standing frame (each 60*60cm for both sides), bolts, screws, hot galvanized supports, "C" section, angles..etc, and putty and two coats of emulsion paints according to specifications, drawings and engineer instructions. (Drawing A07)	m ²	50		
2.10	Supply and install gypsum cornice 15*15cm. The price includes putty and two coats of acrylic paint (Supercryle), smoothing and required accessories according to specifications, drawings and engineer instructions. (Drawing A07)	L.M.	90		
2.11	Supply and install gypsum frame, 3cm wide. The price includes putty and two coats of acrylic paint (Supercryle), smoothing and required accessories according to specifications, drawings and engineer instructions.	L.M.	130		
Total					

Development of Conference Halls in K3 Buiding (The First Floor)					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
3 Aluminium & Metal Works:					
	The items include supplying aluminum windows section 7000 matching the existing ones, with min. wall thickness 1.5mm (to be approved by representative engineer) as frame, glass 4 mm thick, ironmongery , accessories and hard ware along with fixing as per specification and drawings. All maintenance works include all needed materials for reinstatement and workmanship. Steel work should be properly treated and prepared, painted with two coats of oil paint,one primer (polyzinc) and one undercoat.The price shall include removing the damaged aluminum and steel works and handing to the the university engineering office				
3.1	Supply and install Aluminium handrail for stairs and ramps with height of 85 cm, the price includes pipes of 5cm Dia., 2.5mm thick and vertical pipes 4cm Dia., 2.5 mm thick, each 70cm, three longtiudal 16mm pipes each 17cmm, vertical pipe 6.5cm Dia., 2.5mm thick each 200cm, the works includes fixation by steel rods with special adhesive materials, elbows, clips, stainless steel bolts, all accessories required to complete the job, the price also includes, dismantle the existing steel handrail and deliver to university stores according to specifications, drawings and engineer instructions. (Drawing A04)	L.M.	24		
3.2	Supply and fix powder coated color Aluminium window (grade A) equivalent to Klil 7000, complete with frame, sliding leaves , two layers of clear glass, 6mm thick for the external and 4mm thick for the internal. The prices includes fixed partition 4500 type for the upper side 40cm height with two layers of clear glass of 6mm, 4mmt thicks for external and ineternal respectively, ironmongery and hardware and as per specifications and/or the engineer's instructions. (Drawing A04)	m ²	67		
3.3	Supply & install Mul-T-Lock door type 417 with over all size 98cm width x 210cm height with powder coated paint. The price includes winodw of 30*50cm, two layers of 6mm clear glass, steel rod 10*10mm each 10cm between the two layers, door lock type 235 & Mul-T-Lock serrated cylinder, door stopper and all other fitting, dismantle the existing door and frame, to be delivered to university stores, casting concrete for the new frame (the works also include building blocks, R.C concrete, reinstatement of plaster, ceramic tiles, painting to match the new design). All to be carried out according to the specifications and the engineer instructions. (Drawing A05)	No.	1		
3.4	Ditto but two leaves 196cm wide	No.	2		
3.5	Supply and fix steel protection for windows. The price includes painting with one coat of primer, undercoat and at least two coats of oil paint., fixed on walls by steel angle ties and plates, all according to drawing, specification and engineer instructions. (Drawing A06)	m ²	80		
Total					

Development of Conference Halls in K3 Buiding (The First Floor)					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
4 Wooden Works:					
	1- The contractor shall submit shop drawings for all items. 2- The contractor has to take engineer approval for raw materials for the each item (MDF, Plywood, soft and hard wood, locks, brace hinges, stainless steel grade 304, foam 32kg/m3, high quality textile and all accessories required) before manufacturing. 3- All wooden works includes painting with high quality paints. 4- Type of cladding works shall be similar to existing in Hany Al-Shawwa hall. 5- Price includes workmanship, transportation and installation. 6- The items include supplying carpentry works from good wood grade "A" including frame cover mould, architrave, sanding sealer, prime coats , at least two coats of oil paint, 15cm Aluminum kick plate 1mm thick from both sides , hard ware, locke type Wally switch or equivalent and brass hinges 10cm height, door stopper and all other fitting according to specification and drawing.				
4.1	Supply and install wall cladding of MDF 17mm thick covered with beech veneer (Zan), hard wood (Zan) supports 4mm thick, 20mm wide each 98cm by height of cladding, the price includes decorative wooden columns (semi circle section) of hard wood 7cm Dia. and 220cm height, MDF cornices 10cm height for the upper and lower edges of the wall, fixing by wooden wedges and hidden screws, any decorations to hide joints, painting with one coat of sanding sealer, two coat of approved lazoure paint and one coar of lucker and any accessories and materials to complete the job as per specifications, drawings and engineer instructions. (Drawing A11)	m2	45		
4.2	Ditto but for platform back wall. (Drawing A12)	No.	1		
Total					
5 Furniture Works:					
	1- The contractor shall submit shop drawings for all items. 2- The contractor has to take engineer approval for raw materials for the each item (MDF, Plywood, soft and hard wood, locks, brace hinges, stainless steel grade 304, foam 32kg/m3, high quality textile and all accessories required) before manufacturing. 3- The contract shall provide sample after manufactruring for submission. 4- All furniture works includes painting with high quality furniture paints. 5- All steel furniture shall be oven painted. 6- Type of textile shall be similar to existing in Hany Al-Shawwa hall. 7- Price includes workmanship, transportation and installation. 8- All used textile, leather, moquette and carpets must be of brand name.				
5.1	Supply and install high quality moquette (Super lugo or equivalent), the price include upper Aluminium angles for upper steps edges 30*30*1.25mm, stainless steel angles 30*30*1.25mm for lower edge, skirting, sticking materials, cleaning and preparation the surface to install the moquette according to specifictions and engineer instructions. (Drawing A08)	m ²	200		

Development of Conference Halls in K3 Buiding (The First Floor)					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
5.2	Ditto but for walls, 2.20m height fixed on soft wood 2*2cm for each 60cm, the price includes filling the space between woods by foam 2cm thick, decorative hard wood (Zan) 5*3cm along the wall on the top and bottom of the moquette and according to specification and engineer instructions. (Drawing A08)	m ²	45		
5.3	Supply and install theatre chair (Turkish made class "A" of equivalent), high desnity foam 32kg/m3 covered with class "A" textile with movable arms of fiberglass, the price includes any required accessories and materials to complete the job as per specification and engineer instructions. (Drawing A09)	No.	110		
Total					
6 Electrical Works:					
	General: *The items in general shall also include conduits, connection boxes, controls, wires, connectors, clamps, bolts, and connecting the cables to switchboards and common electric network are included in the unit price. * Contractor shall submit shop drawings for all electrical works to be approved by the Engineer before executing the work. * As-built drawings shall be submitted after handing over the work. * All the electrical works shall be executed according to Standards, drawings, specifications and supervisor engineer instructions. * Dismantling & Removing old lighting unit (fluorescent light fixture, glops, Etc) and move to university stores as per engineer instructions.				
ELECTRICAL WORKS for K3 HALL					
6.1	Supply, install, connect and test high quality two pole one way switch, 220v, 13A, for flush or surface mounted complete with plastic trenches , J. boxes, cables , cover and all necessary accessories according to engineer instructions. (Type is BTICINO MATIX or equivalent)	No	10		
6.2	Supplying, installing and operating Fluorescent Light Fixture 4x18W for suspended false ceiling (Type is GA'ASH or equivalent) The item includes lamps and starters OSRAM made,electronic ballast, capacitor and all necessary equipments for installation and operation as per drawings, specifications and engineer instructions.	No	3		
6.3	Supplying, installing and operating Spot Light 4 inch diamater,220V, with 32watt PL lamps for suspended false ceiling (Type is GA'ASH , Elita or equivalent) The item includes lamps Nepton made, ballast,capacitor and all necessary equipments for installation and operation as per drawings, specifications and engineer instructions.	No	50		
6.4	Supply, install connect and, testing high quality single outlet socket outlet 16A for the AC, 220v, 2p+E for flush or surface mounting, complete with plastic trenches , J. boxes, 3*2.5mm2 cable, and all necessary accessories.(Type is BTICINO MATIX or equivalent)	No	5		
6.5	Supply, install telephone socket outlet 6 pin for surface/flush mounting, complete with PVC conduits, J.bboxes, cables, and all necessary accessories. (Type is GEWISS or equivalent).	NO	2		

Development of Conference Halls in K3 Buiding (The First Floor)					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
6.6	Supplying, testing and erecting communication (computer network) socket outlet RJ45, flush type, including CAT5E cables from the socket to the nearst rack, trenches and all according to the tender documents and engineer instructions.(Type is BTICINO MATIX or equivalent)	No	3		
6.7	Ditto, but satellite TV sockets.	NO	2		
6.8	Supply and installation of cabin Rack size 8U forNetwork: - Cat 5 24 port patch panel includes Plug and punctuation - Cisco Switch Number 1 includes plug and cables Patch Cable. - 2 suction fan "number one ride in the roof of the cabin - Electricity distributor with six sockets with current 20 A breaker	No	3		
6.9	Supply , install, test and commission air conditioning Heat Pump Split Unit, composed of out door unit. filled with environment friendly refrigerant such as (R410, R407c,..) and COP not less than 3.5, Well supported on hot galvanized steel base on the roof, indoor unit with plasma filter as indicated on drawings to be tights installed completed with all necessary supports, hangers, drain pipes from indoor unit to the nearest floor drain, (PVC Ø 1"), cupper pipes , sleeves, thermostat , Remote control and including Isolation Switch MOELLER and all required electrical power cables from SDB to the unit according to drawings and engineers approval. CAPACITY : (24000 BTU/HR). (Type is York , ELECTRA or equivalent) .	No	6		
	Supply and install the followings breakers the work includes remove and desmantel the old MCB's in the existing panels with new MCB's as follows :				
6.10	Miniature Circuit Breaker MCB 3X50A. (Type is Moeller or equivalent).	No	3		
6.11	Ditto butr MCB 3X40A. (Type is Moeller or equivalent).	No	3		
6.12	Ditto butr MCB 3X25A. (Type is Moeller or equivalent).	No	6		
6.13	Ditto butr MCB 1X16A. (Type is Moeller or equivalent).	No	8		
6.14	Ditto butr MCB 1X10A. (Type is Moeller or equivalent).	No	8		
6.15	Current transformer (100/5A)	No	2		
6.16	Supply, laying and termination of XLPE CU cable , (5x10)mm2	L.M	20		
PUBLIC ADDRESS (SOUND) SYSTEM					
	Supply ,Install,Connect,and Test the Following Item Below The contractor shall, when pricing of the following electrical bills take into consideration all requirements to finish work complete with all accessories, all equipment items for the loudspeaker, Mixer,... shall be manufactured by RCF,Electro-Voice, or equivalent. Work is to include the supply of the equipment specified installation of ,connection, wiring ,commissioning,Transportation,testing, and all other details ,the prices including all connectors,adapters,plugs.All the requirements according to Specifications, drawings, and Engineers instructions.				

Development of Conference Halls in K3 Buiding (The First Floor)					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
6.17	<p>Supplying, installing and operating Amplifier as per drawings ,engineer instructions with all required cables , junction boxes conduits and all necessary accessorieand the following specifications:</p> <p>PEAVEY#2600 or Equivalent Power Amplifier 2x500 W, 100V</p> <ul style="list-style-type: none"> • 2- Zone Amplifier, • CLASS-D • 1 Mic input ,1 Aux input • Compact and lightweight form factor • Independent SMPS (switching-mode power supply) for each channel • Balanced input Euroblock connection with link and looping • 2 position LOW CUT FILTER, at 65Hz, and 400Hz • Low power consumption, low heat dissipation and light weight • High power PA amplifier, 500W x 2 at 8 ohm. • THD less than 0.03% • S/N. greater than 100dB 	No	1		
6.18	Ditto but Powered Mixer Console with 8 chanels , (Type is PEAVEY or equivalent)	No.	1		
6.19	Ditto but Equalizer Dual channel (15 bands per channel),low-noise, low-distortion design , (Type is PEAVEY or equivalent)	No.	1		
6.20	<p>Supplying, installing and operating microphone desk stand including Vocal Microphone with high level of sensitivity, Pushbuttons for momentary and latching microphone actions, 15-meter cable for amplifier connection with 5-pin DIN connector.</p> <p>(Type is SHURE # SM58 or equivalent)</p>	Set	5		
6.21	<p>Supplying, installing and operating ceiling mounted loud speaker 8" inch Diam. including all required cables , junction boxes conduits and, metal front protection mesh, clips for quick attachment , line transformer all necessary accessories</p> <p>(Type is PEAVEY or COTINA or equivalent)</p>	No.	8		
6.22	Supplying, installing and operating wirless Vocal Microphone as per specifications and engineer instructions. (Type is SHURE # SM58 or equivalent)	No.	1		
6.23	Supplying and installing Aluminum Rack With Lock and two doors to putting mixer and transmitter mic.with power point and strip	No.	1		
6.24	Supplying, installing and operating transformer ,100 volts as a protection to the loud speakers.	No.	2		
Total					
7 Equipments Works:					
7.1	<p>Supply, install, commision of smart board interactive white board (Rio Touch type or equivalent), 102", active diagonal 16:10/97.6, frame diagonal 102, active size 209.9*132cm, frame size 216*140cm, packing size 13*155.3*231.5, resolution 4000*4000, cermaics surface and required accessories and material to complete job as per specification and engineer instructions.</p>	No.	2		
Total					

Development of Conference Halls in K3 Buiding (The First Floor)					
No.	Item	Unit	Quantity	Unit Price \$	Total Price \$
<u>SUMMARY</u>					
1	Concrete Works				
2	Finishing Works				
3	Aluminium and Metal Works				
4	Wooden Works				
5	Furniture Works				
6	Electrical Works				
7	Equipment works				
-	TOTAL				

OVERALL SUMMARY

NO.	Description	Total price (\$)
1	Total of Rhabilitation of Damaged Buildings - US\$	
2	Total of Development and Rehabilitation of Various Halls - US\$	
3	Total of Development of Conference Halls in K3 Buiding (The First Floor) - US\$	
Total		

Total in numbers:

Total in letters:

Name of the contractor:

Authorized signature:

Signature and Sealing:.....

Title:

Telephone:.....

Fax:

Mobile: