

Civil Technology

S#	Items /Equipment/Machinery	Specification	GCT Swabi	GCT Swat	GCT Bannu	GCT Kohat	Quantity Required	Unit Price (Inclusive All Taxes & Transportation)	Total Price (Inclusive All Taxes & Transportation)
1.	Compaction factor Machine	Two rigid conical hoppers and a cylinder mounted on a rigid metal frame. The lower openings of the hoppers are fitted with hinged trapdoors having quick release catches. A circular metal plate is provided to cover the top of the cylinder. Supplied complete with one plasterer's trowel and one tamping rod, 16mm diax600 mm long, one end rounded.			1		1		

2.	<p>Compression testing machine portable type with accessories 3000 KN CAPACITY. ASTM C 39</p>	<p>Motorized, suitable for testing 150 x 300 and 160 x 320 mm; cylinders and also for testing 150 mm. cubes, prismatic and Brazilian tests. Reading effected by means of a digital display. Accessories for Compression for Machines: REDUCTION PLATEN, made of steel. Thickness: 50 mm. REDUCTION PLATEN, made of steel. Thickness: 75 mm. ● SAFETY GUARD. ● COMPRESSOMETER, For the determination of static elasticity modulus. Used for the measurement of stress and strain on Ø 150 x 300 mm. cylinders during compression test. ● COMPRESSOMETER, For the determination of static elasticity modulus. Used for the measurement of stress and strain on Ø 150 x 300 and 160 x 320 mm. cylinders during compression tests. Complete with three aluminum rings, 2 centesimal dial gauges and carrying case. ● COMPRESSOMETER, For the determination of static elasticity modulus. Used for the measurement of stress and strain on cubes with side 150 mm. during compression test. ● FLEXURAL TEST SET, Used with 150 x 150 x 600 mm. beams. Complete with steel flexural bearers. ● SPLITTING TENSILE TEST SET (Brazilian test), Suitable for Ø 150 x 300 and 160 x 320 mm. specimens. It is composed of a lower bearing plate with self-centering system and of an upper articulation with compression platen. ● FLEXURAL TEST SET, For test on ceramic floor tiles, terrazzo, tiles, pieces of clays and bricks. 150 KN Capacity</p>			1		1		
3.	<p>Concrete Beam Moulds ASTM Standards</p>	<p>For preparation of concrete beam tests, made in non-deforming steel, easily disassembled. Set of 11. Dimensions 10 x 10 x 40 cm. Dimensions 10 x 10 x 50 cm. Dimensions 15 x 15 x 60 cm. Dimensions 15 x 15 x 75 cm. Dimensions 20 x 20 x 80 cm. Dimensions 6" x 6" x 18". Dimensions 6" x 6" x 21". Dimensions 6" x 6" x 24". Dimensions 6" x 6" x 30". Dimensions 6" x 6" x 36". Dimensions</p>			1		1		

		6" x 6" x 40".							
4.	Concrete Rebound Hammer Tester	Resiliometer Schmidt Hammer Test Meter Tool within the scope of 10-60 Mpa		2			2		
5.	Cross staff	Cross staff	2				2		
6.	Cubes moulds	SINGLE CUBE MOULDS ASTM Standards, For preparation of concrete cube tests. Made in non-deforming steel, easily disassembled. Set of 6, Dimensions 2 x 2 x 2 inch. Dimensions 10 x 10 x 10 cm. Dimensions 15 x 15 x 15 cm. Dimensions 20 x 20 x 20 cm. Dimensions 30 x 30 x 30 cm. Dimensions 6" x 6" x 6".			1		1		
7.	Curing chamber	A) 24 Hour cycle from time of mixing. B) Controlled 35oC or 100oC ±2oC Curing Temperature for concrete. c) Controlled 27oC ± 2oC Curing Temperature for grey cement. Accommodate 150mm/70.6mm cube moulds upto 36/72 cube mould and fully insulated, complete with a hinged lid, heater, thermostat and re-circulated pump. Provision of two removable racks allowing free circulation of water around each mould. Temperature control range is 35oC or 100oC ± 2oC / 27oC +2oC			1		1		

8.	ELECTRONIC DIGITAL BALANCE.	set of four balances) a) 20 kg with accuracy of 1 gm b) 5 Kg with accuracy of 0.1 gm c) 1 kg with accuracy of 0.01 gm 2). Solution balance with 20 kg capacity.		2			2		
9.	GLASS WARES AND HARDWARES TOOLS:	Beaker 500 ml capacityü beaker 1000 ml capacityü graduated cylinder 1000 ml capacityü graduated cylinder 2000 ml capacity ü steel hammerü spatulaü stainless steel bowls ü steel trayü vernier caliperü stop watchü desiccatorü canvas glovesü gloves, latex rubberü plastic bottle, cap. 2 l. ü plastic bottle, cap. 5 l.ü rubber bucket, cap. 12 l.ü rubber bucket, cap. 18 l.ü canvas 2 x 2 m.ü flat brushü pick hammerü rubber hammerü flat scoopü small curve scoopü medium curve scoopü large curve scoopü spoonü beaker		2			2		
10.	GPS	Magellan GPS (Global Positioning System) hand o held colored Screen accuracy (plus minus) 3 meter	1	3		1	5		
11.	HINGED CYLINDER MOULDS, ASTM C31	Made of steel. Suitable for the preparation of test cylinders. Dimensions Ø 100 x 200 mm. Dimensions Ø 150 x 150 mm. Dimensions Ø 150 x 300 mm. Dimensions Ø 6" x 12". Accessories: HOPPER for Ø 150 x 300 mm. cylindrical mould. COMPACTIGN ROD. Long. 50 cm.		9			9		

12.	Laboratory Concrete Mixer	110 liters vessel with blades inside for mixing with tilting facility. Vessel Rotation 20-22 RPM, Fitted with ½ HP motor. Suitable for Operation on 220V, Single Phase, 50Hz, AC Supply			1		1		
13.	Laboratory Concrete Mixer (Hand Operated) Hand operated concrete mixer and is suitable to mix 1 cft to 1. 1/2 CFT material. Mounted on two rubber tyred/stand.	Specifications:Weight: Around 2000Kg Mixing Star Mixing Blade (Qty): 1x2 Mixing Power: 10-15KW			2		2		
14.	Le-Chatliers moulds with accessories	LE CHATELIER WATER BATH, Made of stainless steel and incorporates a 1000 W heater enabling the water to reach boiling point within 25 minutes. Regulation of temperature through hydraulic thermostat from +5 to 100°C. Complete with resistance-tray, cover and thermometer. Allow to realize different tests simultaneously. Power supply: 220 V. 50 Hz. LE CHATELIER MOULD, Ø 30 x 300 mm. Long. LE CHATELIER GLASS PLATES (2), 50 x 50 mm. LE CHATELIER CLIP to hold the glass plates, LE CHATELIER FLASK, ASTM standards (Relative density of hydraulic cement). Graduated from Ø to 1 ml. and from 18 to 24 cm ³ , Capacity: 250 ± 0.05 cm ³			1		1		
15.	Level Aluminum	Level Aluminum	2				2		

16.	Measuring tape	100ft ,150ft ,50 ft each 3 in numbers, rewinding surveying tape measure with inches/feet on one side, metric on the other, Durable, enclosed ABS plastic case with rubber grips, Non-stretch, flexible, wear-resistant vinyl-coated fiberglass tape, Collapsible, locking 180-degree pivot hand reel and flexible expanding handle		9	5		14		
17.	Mixing trowels	Forged from a single piece of high grade steel, Size 8"x 4-3/8"			5		5		
18.	Oven	Stainless steel drying oven 50liter temperature control maximum temperature range 200C 220 to 240Volt A.C50 Hz single phase	1				1		
19.	Pick-axe	7lbs, Overall Head Length: 19", No. 6 Eye, Blade Width: 2.5", Handle Length: 36" wooden			5		5		
20.	Plane table with all accessories	Plane table with u-fork, plum bob, trough compass, set square, alidade.		4			4		
21.	Plastic limit apparatus ASTM D4318	Set of plastic limit 1. Glass plate 300mm square x10mm thick2. Metal rod Dia 3x100mm length 3. Porcelains dish dia 100mm4. Flexible spatula with 120mm blade length 5. Aluminum cane (6 nos) Dia 55x35mm6. Carrying case.	3				3		
22.	Plumb Bob	16 oz Brass Plumb Bob, Polished-lacquer, solid-brass construction is durable and rust resistant Replaceable, hardened steel tip is long-lasting Screw top simplifies attaching string to center of plumb Thru hole ensures easy tightening			10		10		
23.	Prismatic compass	Prismatic compass with stand	2				2		

31.	Theodolite Electronic with all accessories UK/USA/Europe/Japan	1. Accuracy five second 2. Aperture 45mm3. Angle measuring mode absolute encoder.4, Tilt sensor automatic vertical compensation.5. Display five second 6. Magnification 30 X7. Measurement 175mmx L170Xh 334 mm8. Lens cap 9. Lens brush10 Battery case 11. Instructional Manual 12. Carrying case 13. Aluminum Tripod or all specs higher	1				1		
32.	total station Electronic with all accessories UK/USA/Europe/Japan	Electronics Total Station Alpha numeric Keyboard all keys are back light and glow brightly so one can see exactly what are man dump, even when working in low light condition 1" reading 6" accuracy internal memory 10000 points memory card slot and USB Flash memory slot built in area calculation system automatic dual axis compensation distance range with single prism 4000m with triple prism 5000m with reflective sheet RS 90 N-K 150m 1 No battery quick charger and charging time 70 minutes in standard accessories	1			1	2		
33.	Triangular scale	Arteza 12" Triangular Architect Scale Aluminum Color-Coded Grooves (Imperial), Size: Architect Scale, • One 12" Triangular Architect's ruler features 3 sides with 6 different scales,• Professional grade for supreme accuracy, • Color-coded grooves for quick and accurate selection of the desired scale, • Made from high grade anodized aluminum, • Imperial Scale: 1-1/2", 1, 3/4", 3/8", 3/16", 3/32", 1/2" 1/4", 1/8", 3, 16			10		10		
34.	Trowel	10" Masonry Trowel Carbon Steel Blade Grounded & Polished Steel Ferruled Hardwood Handle, Easy to use. Durable carbon steel blade measures 10, Balanced right for ease of use, Fitted with steel-ferruled hardwood handle for comfort			10		10		

35.	Vicat Apparatus ASTM/C-187 or initial and final setting time of cement	Hand operated Vicat apparatus formed of metal frame Dia 10mm sliding plunger weighing 300mm and graduated scale Completer with needle Dia 1.13mm for initial setting time ., final setting time needle .glass plate Dia 120mm Accessories.1.. Needle Dia 1mm for initial setting time 2. Needle dia 1.13mm for final setting time.3. Glass plate Dia 120mm 4. Vicat mould ASTM	1				1		
36.	Slump cone with accessories	Specification:-1. Slump cone, made from galvanize plate, suitable for measuring cohesive of Concrete.2. TAMPING ROD, made from steel Dimension 16x600 mm.3. Hopper, used for filling the slump cone, made from aluminum.4. BASE Plate made from galvanized sheet iron with handle Dimension 60x40 cm Graduated Rule made from stainless steel. Length300mm			5				
37.	water analog magnetic flow meter for discharge Measurement			2			2		