

ANNEX AGRI - 10

Sector: AGRICULTURE

Sub-Sector: IRRIGATION

Activity: Water and soil analyses

Priority within the Sector: First

Total requested fund : _____

Code	Item Description and its complementary items (if applicable)	Intended use (and targeted end user)	Qty. in unit	Requested fund US \$(000)	Allocation Criteria	Time frame	
						Optimal application	Optimal delivery
05-10-00001	Water And Soil Analyses Equipment's And Materials. See App. 10A codes 00003-00058	Improvement of water , material and soil analyses processes. (Soil , material test and water quality monitoring in all 15 Governorates)	As stated in App. 10A		Resemble requirement for repairs and replace ment.	ALL YEAR	AS SOON AS POSSIBLE
05-10-00002	Soil mechanics and construction laboratories apparatus See App. 10A codes 00059-00114	Improvement of soil mechanics and construction laboratories and testing in all 15 Governorates)	As stated in App. 10A		Resemble requirement for repairs and replace ment.	ALL YEAR	AS SOON AS POSSIBLE

**APPENDIX 10 A .
WATER AND SOIL ANALYSIS EQUIPMENTS**

Code	DESCRIPTION	QUANTITY
05-10-00003	-PH checker stick model	10
05-10-00004	-Bench PH meter	25
05-10-00005	-Water proof , auto ranging conductivity /TDS/ C° meter	10
05-10-00006	-Conductivity meter with platinum probe different ranges	50
05-10-00007	- Dissolved oxygen meter	5
05-10-00008	-Water proof& rugged thermistor thermometer	10
05-10-00009	- Colorimeter	5
05-10-00010	- Turbidity meter	2
05-10-00011	-Relative humidity meter	2
05-10-00012	-Water bath	6
05-10-00013	- Shaking water bath	2
05-10-00014	- Titration Burette , digital rate electronic	25
05-10-00015	- High speed centrifuge	2
05-10-00016	- Chemical calculator	10
05-10-00017	- Incubator	1
05-10-00018	- Binocular microscope	2
05-10-00019	- Atomic absorption spectrop - photometer	1
05-10-00020	- Hotplate	6
05-10-00021	- Shakers	4
05-10-00022	- Hallow cathode (lamps) for atomic absorption	32
05-10-00023	- Block heaters	1
05-10-00024	- Mills	1
05-10-00025	- General purpose augres	30
05-10-00026	- Clay augres	20
05-10-00027	- Sand augres	20
05-10-00028	- Augres extension 34"	30
05-10-00029	- Augres extension 44"	30
05-10-00030	- Hand grips	10
05-10-00031	- Acid transfer hand pumps	10
05-10-00032	- Density meters	2
05-10-00033	- Protein tester	2
05-10-00034	- Pressure ceramic plate	40
05-10-00035	- Beakers	300
05-10-00036	- Bottles	1000
05-10-00037	- Bottles carboys	45
05-10-00038	- Washing bottles	150
05-10-00039	- Filter paper (different grades and diameters)	2000 box
05-10-00040	- Membrane filter size 47	200 box
05-10-00041	- Pipettes	250

Code	DESCRIPTION	QUANTITY
05-10-00042	- Pippettes fillers	200
05-10-00043	- Respirators	10
05-10-00044	- Chemical reagents * Sodium Salicylate * Sulfanyl amide DF1 - B -7 * Sulfuric Acid Analar 98% * Acetone Analar * Cadmium chloride * Ammonium Acetate	30 Kg 10 Kg 200 L 200 L 5 Kg 100 Kg
05-10-00045	- Tubing	150 m length
05-10-00046	- Spatulas	60
05-10-00047	- Electronic pentograph	2
05-10-00048	- Gouch crucible glass	50
05-10-00049	- Normal sols	2000 ampul
05-10-00050	- Indoor & outdoor weather monitoring system	16
05-10-00051	- Parafilm	60
05-10-00052	- Flame photometer	6
05-10-00053	- Insulation measuring device	23
05-10-00054	River discharge measurement station& current meter	150
05-10-00055	Centralised Monitoring system for Dams , Barrage& major Irrigation Intake	1 set
05-10-00056	Pentium II computer with all accessories	3
05-10-00057	Color laser printer size (A3)	2
05-10-00058	Color scanner high resolution	2
05-10-00059	Mastic test equipment according to ASTM D1851	1
05-10-00060	Apparatus for determining the liquid limit and plastic limit of soils according to AASHTO T-89	1
05-10-00061	Compactor machine for Asphalt concrete (Marshall specimens)	2
05-10-00062	Electric Asphalt penetration test apparatus according to ASTM D5	1
05-10-00063	Needle for penetration test of Asphalt according to ASTM D5	50
05-10-00064	Asphalt core cutting machine,diesel engine, speed 424 R/M.	1
05-10-00065	Core cutters diameter 4 in and 6 in	150
05-10-00066	Precision balance capacity (210 gm), readability(0.0001 gm)	10
05-10-00067	Precision balance capacity (810 gm), readability(0.001 gm)	2

Code	DESCRIPTION	QUANTITY
05-10-00068	Top pan balance capacity (6200 gm),readability(0.01 gm)	2
05-10-00069	Top pan balance capacity (16000 gm),readability(0.1 gm)	2
05-10-00070	Bench scale balance capacity(34.2 Kg), readability (0.5 gm)	2
05-10-00071	Combustion Crucibles up to (1200) °C without cover and spout medium, high form , capacity (50) ml	80
05-10-00072	Combustion Crucibles up to (1200) °C without cover and spout medium, high form , capacity (150-200) ml	60
05-10-00073	Combustion Platinum Crucibles without cover and spout capacity (50)ml	7
05-10-00074	Portable thermometer for concrete range (0-50) °C	10
05-10-00075	Portable thermometer for asphalt concrete range (-10-250) °C	35
05-10-00076	Water Distilling Apparatus made of stainless steel output capacity (12 Lit/hr)	3
05-10-00077	Water Distilling Apparatus made of stainless steel output capacity (20 Lit/hr)	5
05-10-00078	Vacuum Pump (220)volt , 50 Hz, 3 phase producing ultimate vacuum (12-15) mmHg with desiccator about (25-30) cm diameter	9
05-10-00079	Mettler DL-40 Memo Titrator ST 20 Sample Changer Automatic with (5) electrodes for chloride ions percent determination .	1
05-10-00080	Digital thermometer with surface temperature probe measuring range (-50 - + 300) °C for concrete and asphalt measurement	20
05-10-00081	Core Drilling Machine electrically operated 220 volt ,AC 50 Hz single phase with diamond core cutting barrel 4in inside diameter	3
05-10-00082	Pundit , measurement of concrete uniformity , determination of the presence and absence of void cracks and other imperfections in accordance with BS1881/203	5
05-10-00083	Digital crack measuring range battery operated ± 50 mm measuring range, 0.01 mm resolution with locating disk and silver oxide cell	1

Code	DESCRIPTION	QUANTITY
05-10-00084	Hand held digital half cell and data logger system complete to comply to BS1881 and ASTM C876	3
05-10-00085	Micro cover meter for measurement down to 360 mm depth complete with probe incorporates an imperial and metric mode for determining the position and direction of steel reinforcement and depth of cover to the steel	3
05-10-00086	Machine for testing the tensile strength of steel reinforcement according to ASTM A 615 M , capacity 1000 kN , readability 0.1	3
05-10-00087	Compression test machine capacity 3000 kN ,readability 0.2	1
	* Cement test apparatus	
05-10-00088	- Vicate frame setting time apparatus	1
05-10-00089	- Mortar mixer	1
05-10-00090	-Lechatlier method for soundness cement apparatus	2
05-10-00091	- Blain air permeability apparatus	2
05-10-00092	- Cement heat of hydration apparatus	2
05-10-00093	- Norm sand DIN 1164 for cement mortar	2 ton
05-10-00094	- Beckman thermometer	40
05-10-00095	- Lechatlier flask for cement density	20
05-10-00096	- Automatic cement mortar flexural &compression machine	1
	* Concrete test apparatus	
05-10-00097	- Concrete core drilling (vertical and horizontal)	2
05-10-00098	- Concrete mixer	1
05-10-00099	- Slump test apparatus	3
05-10-00100	- Protected thermometer (-10-+200)°C	25
05-10-00101	- Digital thermometer (-10-+200) °C	5
05-10-00102	- Analytical balance cop 160gm accuracy 0.1 mg	2
05-10-00103	- Micro wave oven	3
	* Soil test apparatus	
05-10-00104	- Triaxial testing equipment with accessories	1
05-10-00105	- Triaxial cells 70- 150 mm	4
05-10-00106	- Direct shear apparatus with assemb	2
05-10-00107	-Field density determination(sand pouring cylinder)	4 set
05-10-00108	- Grain size analysis test by hydrometer apparatus	6
05-10-00109	- Seive set 75 μ mm -100 mm	2
	*Asphaltic concrete apparatus	
05-10-00110	- Softening point apparatus	2
05-10-00111	- C.B.R - marshall - tester with accessories	1
05-10-00112	- Centrifuge extractor	2

Code	DESCRIPTION	QUANTITY
05-10-00113	- Standard penetrometer	2
05-10-00114	- Speedy apparatus for testing compaction on site	10

**APPENDIX 10 B .
INSTRUMENTATION REQUIRMENTS**

Code	DESCRIPTION	QUANTITY
05-10-00115	Bourden Gauge (Manometer). Finite B Manometer Diameter of Gauge 6" Sensitivity 0.1 Bar * Range 0 - 16 Bar	300
05-10-00116	* Range 0 - 10 Bar	250
05-10-00117	* Range 0 - 6 Bar	200
05-10-00118	Rocmeter (M. Bore - Hole Extensometer) Dial Gage Range 0 - 100 mm., Sensitivity 0.06 mm.	2
05-10-00119	Rocmeter Extensometer Indipoc P4 Electrical Device	1
05-10-00120	Teletensometer Indipoc P2 (Read Out Unit) Electrical Device	1
05-10-00121	Seba Hydrometer, Dipmeter For Measuring Water, Level Inside Open Air Piezometer * Length 100 m.	5
05-10-00122	* Length 150 m.	5
05-10-00123	Interfels Dial Gage, Read Out Unit For Multi Road Extensometer. Range 0 - 100 mm. Sensitivity 0.06 mm.	2
05-10-00124	Battery (NI - CD) For MDS 910 1.2 V, 10 AH (VR 10 SF 023 CEIKRH 44/91)	36
05-10-00125	Battery Globe GC 626 - 1, 12 V For SMA - 1 Strong Mottron Accelerograph	20
05-10-00126	Battery Charger For SMA - 1 Strong Motion Accelerograph (700084)	5
05-10-00127	Film, Kodak 70mm. X50 Ft. For SMA - 1 Strong Motion Accelerograph(2497 ,SPEC 524)	5
05-10-00128	Battery PP9 / 9V For Vibrating Wire Readout	20
05-10-00129	Injection pump for Epoxy and polyrethen with accessories Q= 200 l/min .	6
05-10-00130	Galvanized pipe different diameters (for piezometers)	10000 m

**APPENDIX 10 C .
SURVEYING EQUIPMENTS**

Code	DESCRIPTION	QUANTITY
05-10-00131	Straight line white line depth recorder (Echo - Sounder) for rivers, canals and lakes to be mounted on small or rubber boats measure water depths up to 100 Mts.	16
05-10-00132	Electronic Planimeter to measure Area , Line length . X,Y coordinates , with display screen and recorded out - put , rechargeable , battery	8
05-10-00133	Dist . Measur . Range 3500M . for(1) prism (or a bout) Angle Accuracy 1 sec dist . Accuracy 2 mm + 2 ppm . With control unit . and all other standard complementary accessories .	20
05-10-00134	EDM - instruments with Robotic Total Station Dist . Measure Range (1500 M . for 1 prism or a bout) Angle accuracy 1 sec dist . Accuracy 2 mm + 2 ppm . With control unit , and all other standard complementary accessories .	36
05-10-00135	Geodatwin field control unit with CPS - Glonass system with all standard accessories . Global Positioning system (GPS)	10
05-10-00136	- Field instrument (maglan)	4
05-10-00137	- Modern two colours computerized offset printing machine for paper	4
05-10-00138	- Image setter or electronic scanner for colour separation and montage processes complete with its computer and accessories	3
05-10-00139	Reproduction (two rooms) camera with all accessories	1
05-10-00140	Automatic printing plates developing and fixing with all accessories	1
05-10-00141	Precise digital electronic level complete with staffs	12
05-10-00142	Engineering digital electronic level with staffs	40
05-10-00143	Range finder for (GIS) application	2
05-10-00144	Complete modern (GIS) station with all accessories for(20) users	2
05-10-00145	Complete analytical photogrammetric work station with large size flat-bed digital electronic plotting unit & all necessary software	2
05-10-00146	Complete digital photogrammetric workstation	2
05-10-00147	Under water monitoring camera with accessories	2