

HIMACHAL PRADESH
PUBLIC WORKS DEPARTMENT

No.:PW/EDP/CB/TA/CONT/2022-23/ 4131-39

Dated: 05/8/2022

To

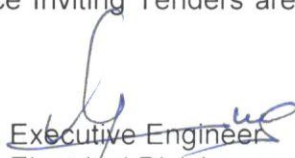
The Executive Engineer (IT Cell),
Nigam Vihar, Shimla-2.

Subject: Publishing of Tender Notice.

Enclosed please find herewith the Tender Notice of works as given in the Notice Inviting Tenders along with Schedule of Quantities for uploading on departmental website as per Notification Pr. SEC(PW) to the Govt. of HP letter No. PBW(B)A9(3)1/2020 dated Shimla-26th July 2021.

It is certified that the works mentioned in the Notice Inviting Tenders are urgent in nature and in public interest.

DA/NIT, SQs


Executive Engineer
Electrical Division
HPPWD Palampur

Copy forwarded to the following for information and necessary action please:

1. The Superintending Engineer, 2nd Electrical Circle, HPPWD Dharamshala.
2. The Drawing Branch in this office.
3. All the Assistant Engineers working under this division.


Executive Engineer
Electrical Division
HPPWD Palampur

**HIMACHAL PRADESH
PUBLIC WORKS DEPARTMENT**

"Notice Inviting Tenders"

Sealed item rate tenders on form 6&8 are hereby invited by the Executive Engineer, Electrical Division, HP PWD Palampur on behalf of the Governor of H.P. for the following work from the approved and eligible contractors enlisted in HP.PWD, (Elect.) whose registration stood renewed as per revised rules and also registered under the H.P. General Sales Tax Act. 1968 so as to reach in his office on or before **17.08.2022** up to 11.00 AM, and the same shall be opened on the same day at 11.30 A.M. in the presence of intending contractors or their authorized representatives. The tender documents can be had from hppwd.gov.in.

The earnest money in the shape of FDR/saving account of the Post office/Bank in H.P. duly pledged in favour of the XEN and the cost of tender in shape of Bank Draft must accompany with each tender. Conditional/ incomplete tenders & tender without earnest money will be summarily rejected. The XEN reserves the right to accept or reject any or all tenders or drop the proposal of tenders without assigning any reasons.

Conditions:

1.The contractor should have to attach the valid registration certificate in appropriate class in HPPWD, GST registration certificate and EPF registration certificate with each tender, failing which the tender will be rejected.

2.The contractor should have to attach work done certificate, GST registration certificate & EPF registration certificate with each tender, failing which the tender will be rejected.

Sr. No	Name of Work	Estimated Cost	Earnest Money	Time Limit	Form No.	Cost of Form
1	Additional Alteration to Civil Hospital at Nurpur in Tehsil Nurpur Distt. Kangra (H.P.)(SH:- C/o Toilet Block at Ground , 1st & 2nd Floor) (SH:- Providing E.I. therein).	331746/-	6700/-	One Year	8	350/-
2	Repair & Maintenance of E.I. to various Govt. Non-Residential buildings of 500 bedded Hospital Dr. RPGMC Kangra at Tanda. (SH: Rewinding of ceiling fans, replacement of fan condensers, fan regulators, extra down fan rods and ball bearing etc. in various Wards of Ground floor to fourth floor and OPD area therein).	198400/-	4000/-	Two Months	8	350/-
3	Repair & Maintenance of HVAC system installed in Auditorium Building Dr. RPGMC Kangra at Tanda (SH: Replacement of defective valves/insulation of chilled water lines, rewinding of motor, servicing of AHUs and overhauling of chilled water pumps thereof).	498850/-	10000/-	One year	8	350/-
4	Providing Earthing/lighting arrester to various blocks at NIFT Chheb Campus at Kangra (H.P.).	318526/-	6400/-	One Month	8	350/-
5	Repair & Maintenance of Portable Fire Extinguishers of different capacity and types in G.F. to 5 th floor, Service area & Fire Pump Room of SSB therein for the year 2022-2023	113715/-	2300/-	One Month	8	350/-
6	Providing & fixing Split type 2.0 Ton Air Conditioner (Hot & Cold type) in the chamber of Superintending Engineer (B&R) 9 th Circle HPPWD Nurpur Distt. Kangra H.P.	100227/-	2000/-	Three Months	8	350/-
7	Hiring of DG set 125 KVA for Audio system in HPCA Cricket Stadium Dharamshala (i.e. cost of hiring DG set for 8 days).	115000/-	2300/-	One Month	8	350/-

8	Providing & fixing 125 Kva DG sets for Audio System in HPCA Cricket Stadium.	288534/-	5800/-	One Month	8	350/-
9	Providing & Fixing Campus Lighting and fixing of Security Lights in backside of Minister Block in Circuit House at Dharamshala.	316066/-	6400/-	One Month	8	350/-
10	Providing & Fixing Flood Lights in Police Ground, Sai Ground, and Running Operation of E.I. to HPCA Cricket Stadium Dharamshala during Hon'ble Prime Minister tour (National Conference of Chief Secretaries).	130234/-	2600/-	One Month	8	350/-
11	R/M of E.I to Various Govt. Non residential building in Distt. Kangra under Electrical Sub-Division HP PWD Palampur Distt. Kangra (H.P) for the year 2022-2023.	261856/-	5300/-	One Year	8	350/-
12	C/o Govt. Senior Secondary School Building at Sahla in Tehsil Bhattiyat and District Chamba (H.P) Under RMSA (SH:- Providing E.I. in 2 No. Classroom, Store, Verandah i/c Stair case.)	139530/-	2800/-	One Month	8	350/-
13	Construction of Public Parking (Shopping Complex) in HPPWD Sub Division Holi in Distt. Chamba (H.P) (SH:- Providing E.I. therein).	290120/-	5800/-	Six Months	8	350/-
14	Replacement of switchgear system into new one 2 No Suit for SRU Moti Tibba in Tehsil Dalhousie Distt. Chamba(H.P)	299973/-	6000/-	Six Months	8	350/-
15	C/O 1 No. Type-IV Doctor Qtr. at PHC Dhameta in Teh. Fatehpur, Distt. Kangra (SH:- Providing EI there in)	102950/-	2100/-	One year	8	350/-
16	Repair and Maintenance of Tower type A.C in ICU, Ward I, II and spilt AC in Dr. Duty room etc. installed in Makeshift Covid Hospital Dr. RPGMC Kangra at Tanda for the year 2022-23.	202150/-	4200/-	One Year	8	350/-
17	Providing and fixing of 3.5 KVA UPS inverter in Minister Block Circuit House HPPWD at Dharamshala, Distt. Kangra, HP.	100784/-	2100/-	One Month	8	350/-

SCHEDULE OF QUANTITY

NAME OF WORK :- Additional Alteration to Civil Hospital at Nurpur in Tehsil Nurpur Distt. Kangra (HP) (SH:- C/O Toilet Block at Ground, 1st & 2nd Floor) (SH:- Prov. E.I. therein)			Job No. 1		ESTIMATED COST: Rs.3,31,746/-only. EARNEST MONEY: Rs. 6700/-only TIME ALLOWED: One Year	
Sr. No.	DESCRIPTION	QTY.	RATES		UNIT	AMOUNT
			FIGURES	WORDS		
1	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed steel conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required. Make: KEI/Plaza/Anchor/Anchor (Roma Plus)/Schneider (Livia) Legrand (Myrius) /L&T(Entice).					
i) Group C.		48			Per Point	
2	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 3 pin 5/6 amps modular socket outlet and 5/6 amps modular switch, connection etc. as required. Make: Anchor (Roma Plus)/Schneider (Livia) Legrand (Myrius)/L&T (Entice).	3			Each	
3	Wiring for light/ power plug with 2X4 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed steel conduit alongwith 1 No 4 sq. mm FRLS PVC insulated copper conductor single core cable for loop earthing as required. Make: KEI/Plaza/Anchor/ SCI.	24			Per Meter	
4	Wiring for light/ power plug with 4X4 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed steel conduit alongwith 2 Nos 4 sq. mm FRLS PVC insulated copper conductor single core cable for loop earthing as required. Make: KEI/Plaza/Anchor/SCI.	30			Per Meter	


5	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed steel conduit as required. Make: KEI/Plaza/Anchor/SCI.					
i)	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire	75			Per Meter	
ii)	2 X 6 sq. mm + 1 X 6 sq. mm earth wire	21			Per Meter	
iii)	4 X 10 sq. mm + 2 X 6 sq. mm earth wire	15			Per Meter	
6	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface/ recessed steel/ PVC conduit as required. Make: KEI/Plaza/Anchor/SCI.					
i)	3x1.5 Sq. mm.	36			Per Meter	
7	Providing and installation of following type of Surface mounting Square/round type LED down light luminaire CCT(K)- 6500 with specifications i.e. Power factor > 0.9 , Harmonic Distortion < 20% and efficacy > 100 lumens per watt, CRI rating>80, suitable for Input voltage: AC 220-240 V, 50/60 HZ complete with all accessories, including connections, testing and commissioning etc.as required complete in all respects.					
i)	LED Down Light 18 watt, (Make: Panasonic Cat no PPAM17187)/Bajaj/Wipro	12			Each	
8	Providing and fixing LED Bulk head of following rating with pressure die casting aluminium housing and it should be compatible with specification i.e. Power Factor ≥ 0.9 , Harmonic Distortion <20% and efficacy ≥ 100 Lumens per watt, CRI rating> 70 suitable for input voltage: 220-240 V, 50 HZ, complete with all accessories, connections, testing and commissioning etc. as required.					

	i) 10 Watt, Bulk Head LED (Make:-Bajaj cat no. BIBWP 10W LED)/ Panasonic/Wipro	18			Each	
9	Supplying & fixing following type of Surface mounted luminaires, white power coated CRCA housing diffuser to avoid glare, it should be compatible with specification i.e. Power Factor > 0.9, Harmonic Distortion < 20% and efficacy > 100 Lumens per watt, CRI rating > 70 suitable for input voltage: AC 220-240 V, 50 Hz, complete with all accessories, connections, testing and commissioning etc. as required.					
	i) LED Batten 20W, 4 feet long (Make:- Bajaj, Cat no.BCLAB 20W LED P)/Panasonic/Wipro	12			Each	
10	Providing and installation exhaust fan of following sizes in the existing opening, including making the hole to suit the size of the above fan, making good the damages, connections, testing and commissioning etc. as required.					
	i) Exhaust Fan, Light duty, (Domestic) 300 mm sweep (Make: Usha, Model: Aeroclean LD)/Bajaj (Model: Bahar)/Anchor (Model: Anmol).	6			each	
11	Providing and installation of stationary storage type Electric water heater (Geyser) of various sizes by means of expansion-bolts with nuts and washers, including embedding of expansion-bolts in the wall, making good the damages, electrical connections, testing etc. complete as required:-					
	i) 25 Liter capacity water heater (Cat-A)	4			Each	
12	Supplying and fixing 6 A to 32 A rating, 240/415 V, 10 kA, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.					
	i) Single pole (Make:- Anchor/ Schneider/ Legrand/L&T)	10			Each	

13	Supplying and fixing following rating, double pole, 240 V, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.					
i)	40 Amps. (Make:- Anchor/ Schneider/ Legrand/L&T)	3			Each	
14	Supplying and fixing following rating, double pole, (single phase and neutral), 240 V, residual current circuit breaker (RCCB), having a sensitivity current 30 mA in the existing MCB DB complete with connections, testing and commissioning etc. as required.					
i)	40 Amps. (Make:- Anchor/ Schneider/ Legrand/L&T)	3			Each	
15	Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator) (Make:- Anchor/ Schneider/ Legrand/L&T)					
i)	Double door-8 way	3			Each	
16	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required.	1			Per Set	
17	Providing and laying earth connection from earth electrode with 4.00 mm dia copper wire in 15 mm dia G.I. pipe from earth electrode including connection with copper thimble excavation and re-filling as required.	10			Per Meter	
18	Providing and fixing 4.00 mm dia copper wire on surface or in recess for loop earthing as required.	15			Per Meter	

19	Supplying and fixing of following sizes of steel conduit along with accessories in surface/recess including painting in case of surface conduit, or cutting the wall and making good the same in case of recessed conduit as required. (Make: Sidharth/BEC)					
i) 25 mm. dia		5			Per Meter	
20	Supplying and fixing of following sizes of PVC conduit along with the accessories in surface / recess including cutting the wall and making good the same in case of recessed conduit as required:- (Make: BEC Plast/Anchor)					
i) 25 mm. dia		5			Per Meter	
21	Supplying & fixing suitable size GI box with modular plate and cover in front on surface or in recess i/c providing and fixing 25 amp modular socket outlet and 25 Amps modular SP MCB, "C" curve including connection, painting etc. as required. Make: Anchor (Roma Plus)/Schneider (Livia)/ Legrand (Myrius)/L&T(Entice).	4			each	
22	Supplying and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	10			each	
23	Providing and fixing following rating and breaking capacity MCCB with thermomagnetic release and terminal spreaders in existing cubicle panel board including drilling holes in cubicle panel, making connections, etc. as required. Make: Anchor/ Legrand/L&T.					
i) 63 Amp 10KA		1			each	
24	Providing and fixing Enclosure for MCCBs suitable for 3Pole & 4Pole MCCBs etc. as required. Make: Anchor/ Legrand/L&T.					
i) Enclosure for MCCB		1			each	

25	Supplying and fixing TP&N copper bus-bar chamber suitable for 415 volts capacity with 4 No. copper strip bus-bars each of length and x-section suitable for following current carrying capacities, enclosure made of sheet steel, dust protected, duly powder painted with detachable gland plate and other accessories including drilling holes on the board, making connections, earthing etc. as required.					
i)	63 A Copper Busbar Chambers 15" (SS Enclosure)	1			each	
26	Supplying and erection of wall mounted metal frame structure for switch gear mounting of suitable size, with permissible variation in size of plus minus 5mm, welded frame work made of M.S. angle iron 35mm x 35mm x 5mm, duly welded supporting arrangement of M.S. flats on the front to suit the fixing of SFU including painting and bonding to the existing earth as required:-	0.5			Per Sq. mtr.	
	TOTAL					


 Executive Engineer
 Electrical Division
 HP PWD Palampur


SCHEDULE OF QUANTITY

NAME OF WORK: Repair and Maintenance of E.I. to various Govt. Non-Residential Buildings of 500 Bedded Hospital Dr. RPGMC Kangra at Tanda.
(SH: Rewinding of ceiling fans, replacement of fan condensers, fan regulators, extra down fan rods and ball bearing etc. in various Wards of ground floor to fourth floor and OPD area therein)

Job No. 2

ESTIMATED COST: Rs1,98,400/-only.
EARNEST MONEY: Rs.4000/-only
TIME ALLOWED: Two Months

Sr. No.	DESCRIPTION	QTY.	RATES		UNIT	AMOUNT
			FIGURES	WORDS		
			RATE			
1	Rewinding of ceiling fan 1200/1400 mm sweep new model with copper insulated wire HTP-34 number including varnishing, capacitor, ball bearing etc. as required complete in all respects and to the best satisfaction of Engineer-in-charge.	251			Each	
2	Providing and fixing extra conduit down rod of 20mm dia. x 60 cm with 16/0.20 mm twin twisted flexible, cotton braided, copper cable including painting, connections etc. as required:-	10			Each	
3	Replacement of Fan Condenser 2.5 MFD of Philips/Bajaj or equivalent make suitable for 1200/1400 ceiling fans as required complete in all respects and to the best satisfaction of Engineer-in-charge.	250			Each	
4	Supplying and fixing stepped type fan regulator on the existing modular box including making connections etc. as required.	50			Each	
	Total					


Executive Engineer
 Electrical Division
 HP PWD Palampur


SCHEDULE OF QUANTITY

NAME OF WORK: Repair & Maintenance of HVAC system installed in Auditorium Building Dr. RPGMC Kangra at Tanda. (SH: Replacement of defective valves/insulation of chilled water lines, rewinding of motor, servicing of AHUs and overhauling of chilled water pumps thereof)		Job No 3		ESTIMATED COST: Rs.4,98,850/-only. EARNEST MONEY: Rs. 10000/-only TIME ALLOWED: Six Months		
Sr. No.	DESCRIPTION	QTY.	RATES		UNIT	AMOUNT
			FIGURES	WORDS		
1	Overhauling of chilled water pumps i.e. dismantling and refixing of water pumps along with repair and replacement of water pump seal, bearing etc. as required complete in all respects and to the best satisfaction of Engineer-in-charge.	3			Per Job	
2	Rewinding of 3 phase, 7.5 HP motor of chilled water lines with SWG copper wire including warnishing and refitting etc. as required complete in all respects and to the best satisfaction of Engineer-in-charge.	1			Per Job	
3	Supplying and fixing of butterfly valves in the chilled water lines as required complete in all respects and to the best satisfaction of Engineer-in-charge.	11			Each	
4	Servicing of AHUs with chemical washing of coils as required complete in all respects and to the best satisfaction of Engineer-in-charge.	6			Per Job	
5	Replacement of defective insulation of chilled water line as required complete in all respects and to the best satisfaction of Engineer-in-charge.	48			Per Meter	
6	Supplying and fixing of pressure gauge along with syphon as required for chiller line complete in all respects and to the best satisfaction of Engineer-in-charge.	6			Each	
7	Supplying and fixing of stainless steel strainers for 'Y' striners as required for chiller line complete in all respects and to the best satisfaction of Engineer-in-charge.	3			Each	
Total						

Executive Engineer
 Electrical Division
 HP PWD Palampur

SCHEDULE OF QUANTITY

NAME OF WORK :- Providing Earthing/Lighting arrester to various blocks at NIFT Chheb Campus at Kangra(H.P).			Job No. 4		ESTIMATED COST: Rs.3,18,526/-only. EARNEST MONEY: Rs. 6400/-only TIME ALLOWED: One Month	
Sr. No.	DESCRIPTION	QTY.	RATES		UNIT	AMOUNT
			FIGURES	WORDS		
1	Earthing with copper earth plate 600 mmx600 mmx 3 mm thick, including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 meter long etc. with charcoal/coke and salt complete as required.	8			Per Set	
2	Providing and fixing of lightning conductor finial, made of 25 mm dia. 300 mm long copper tube, having single prong at top, with 85 mm dia 3 mm thick copper base plate including holes etc. complete as required.	8			Each	
3	Supplying and fixing copper tape 20mmx3mm thick on parapet or surface of wall for lightning conductor as required (for horizontal run)	150			Per Meter	
4	Supplying and fixing copper tape 20mmx3mm thick on parapet or surface of wall for lightning conductor as required (for vertical run)	100			Per Meter	
TOTAL						


 Executive Engineer
 Electrical Division
 HP PWD Palampur

SCHEDULE OF QUANTITY

NAME OF WORK: Repair and Maintenance of Portable Fire Extinguishers installed in the Super Specialty Block Dr. RPGMC at tanda..(SH: Refilling of Portable Fire Extinguishers of different Capacity and types in G.F. to 5th floor, Srvicve Area & Fire Pump Room of SSB theirin for theYear 2022-2023		Job No. 5		ESTIMATED COST: Rs.1,13,715/-only. EARNEST MONEY: Rs.2300/-only TIME ALLOWED: One Month		
Sr. No.	DESCRIPTION	QTY.	RATES		UNIT	AMOUNT
			FIGURES	WORDS		
1	Refilling of Portable Fire extinguishers,CO2 type 4.5 kg. Capacity complete in all respect.	32			Each	
2	Refilling of Fire extinguishers,CO2 type 9.0 kg. Capacity complete in all respect.	6			Each	
3	Refilling of Portable Fire extinguishers Water Co2 Gas Cartridge type capacity 9 litrs. Complete in all respect,	13			Each	
4	Refilling of Portable Fire extinguishers ABC type(filled with 50 Map Powder) 1 kg capacity complete in all respect	1			Each	
5	Refilling of Portable Fire extinguishers ABC type(filled with 50 Map Powder) 4 kg capacity complete in all respect.	1			Each	
6	Refilling of Portable Fire extinguishers ABC type (filled with 50 Map Powder) 6 kg.capacity complete in all respect.	13			Each	
7	Refilling of Portable Fire extinguishers ABC type (filled with 50 Map Powder) 9 kg.capacity complete in all respect.	2			Each	
8	Refilling of Portable Fire extinguishers Mechanical Foam type 9 liters Capacity. Complete in all respect.	3			Each	
9	Refilling of Fire extinguishers DCP type Trolley on mounted wheel 25 kg Capacity.	1			Each	

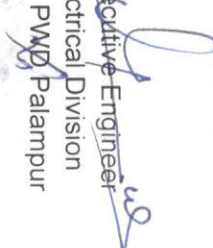
10	Replacement of Co2 Cylinder 4.5 kg. cap. Discharge pipe with flexible Hose complete in all respect	5			Each	
11	Replacement of Co2 Cylinder 9.0 kg. cap. Discharge pipe with flexible Hose complete in all respect	3			Each	
Total						

Executive Engineer
Electrical Division
HP PWD Palampur

SCHEDULE OF QUANTITY

NAME OF WORK :- Providing and fixing Split type 2.0 Ton Air Conditioner (Hot & Cold type) in the chamber of Superintending Engineer (B&R) 9th Circle HPPWD Nurpur Distt. Kangra HP.			Job No. 6		ESTIMATED COST: Rs.1,00,227/-only. EARNEST MONEY: Rs. 2000/-only TIME ALLOWED: Three Months	
Sr. No.	DESCRIPTION	QTY.	RATES		UNIT	AMOUNT
			FIGURES	WORDS		
1.0	Supplying, installation, testing and commissioning of 2.0 Ton (Hot & Cold) Inverter Split type Air-Conditioning unit of following make confirming to I.S.I.-1391 PART-1992 with ammendment No. 1 (expect power consumption norms) fitted with hermatically shielded air-compressor as required complete in all respects.					
i)	A.C. Unit 2.0 Ton capacity					
	Makes: Daikin 1.8 Ton (Hot &Cold) Inverter Split type (Model No. : FTHT60/Mitsubishi/Voltas	1			Each	
2.0	S/F wall mounting voltage stabilizer 5 KVA (Microtek make) automatic type with output 240 Volts with voltage regulator range from 130 volts to 300 volts and Auto cut off beyond this range and time delay operation for the surges and fluctuations suitable for 1.5 TR capacity Split AC making connections etc. as required.					
i)	Make: V- Guard (CAT No. VGB 500 Digital 15 Amp, 130 to 300 Volt)/Whirlpool/Godrej.	1			Each	
3.0	P/F of M.S. out door heavy duty stand powder coated suitable to hang 1.5/2 TR split A.C with six Nos. Anchor bolts as required complete in all respects and as per direction of Engineer - in- charge.	1			Each	
4.0	S/F of Copper tube with insulation for A.C 1.5 TR capacity complete in all respects as required.	4			p/Mtr.	
5.0	S/F of PVC Drain pipe of size 1 Dia (25mm) complete with elbows tees,socket etc. of superior quality as per satisfaction of Engineer-In-Charge.	4			P/Mtr.	

6.0	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed steel conduit as required. Make: KEI/Plaza/Anchor.					
i)	2 X 6 sq. mm + 1 X 6 sq. mm earth wire	12			P/Mtr.	
	Total					


 Executive Engineer
 Electrical Division
 HP PWD Palampur

DRAFT SCHEDULE OF QUANTITY


DRAFT SCHEDULE OF QUANTITY						
NAME OF WORK:Hiring of D G set 125 KVA for Audio System in HPCA Cricket Stadium Dharamshala (i.e. cost of hiring DG set for 8 Days)			Job No. 7		ESTIMATED COST: Rs 1,15,000/-only. EARNEST MONEY: Rs.2300/-only TIME ALLOWED: One Month	
Sr. No.	DESCRIPTION	QTY.	RATES		UNIT	AMOUNT
			FIGURES	WORDS		
1	Hiring of DG set 125 KVA for 8 Days at the site i.e. HPCA Cricket stadium Dharamshala complete in all respect as required at site	8			P/Day	
Total						


Executive Engineer
 Electrical Division
 HP PWD Palampur

SAHCHEDULE OF QUANTITY

SAHCCHEDULE OF QUANTITY						
NAME OF WORK: Providing and Fixing 125 KVA DG sets for Audio System in HPCA Cricket Stadium Dharamshala		Job No. 8		ESTIMATED COST: Rs 2,88,534/-only. EARNEST MONEY: Rs.5800/-only TIME ALLOWED: One Month		
Sr. No.	DESCRIPTION	QTY.	RATES		UNIT	AMOUNT
			FIGURES	WORDS		
1	Providing & Laying of one number aluminium conductor, PVC insulated and PVCsheathed armoured/ XLPE power cable, 1.1 KV grade of following sizes on wall surface as required.					
i	Armoured cable 70 sq. mm (3.5 core)	140			P/Mtr	
	Supplying, Installation, Testing and Commissioning of outdoor single door, Cubical type L.T. main panel. The Panel shall be compartmentalized type having space and arrangement for incoming and outgoing cables/bus ducting, switchgear, insulated and properly supported compartmentalized bus-bars, interconnection between bus bars and switchgear with auxiliary bus bars/insulated conductors/strips etc. It shall be fabricated in 14G/16G CRCA sheet,(750+450)H X 750L X 350 D angle duly painted with Siemens Grey Powder Coated paint, Assembly Charges of 400A 4 strip Aluminium Busbar (Vertical) & Earth strip throughout the length of Panel (current density of Aluminium Busbar shall be 1mmx1mm=1.0 Amp.) Aluminium shall be Electric Grade E-91E. Busbar supports shall be DMC epoxy Insulators. All Busbars Links shall be covered/ insulated with Heat Shrinkable sleeves of coloured coded Red, Yellow, Blue & Black. Approximate Size of Panel H- (750+450)H X 750L X 350 D . Assembly Charges of Aluminium/Copper solid/ Copper flexible wire interconnection Busbar to ACB/ SWITCH & ACB/ SWITCH to field side for Cable termination duly covered/ insulated with Heat Shrinkable sleeves of coloured coded Red, Yellow, Blue & Black. All Interconnections of fields side are supported by conical, L & Finger type insulators of adequate size to support & sustain the weight of cables. Control Wiring with Copper Flexible Wire (size of control wire shall be 2.5 sq. mm copper flexible for C.T. Circuit & 1.0 sq. mm for Control & 1.0sq. mm for Scada Wiring) with thimbles printed sleeves, tie & belt etc. Assembly Charges of Accessories like Gasket, Doorlocks, Copper Flexible door earth, legend plates etc. Conforming IS :8623 Par-1 1993	1			P/Job	
2						
(i)	Incomer (A)					
	MCCB 400A 4P 36KA TMR With O/L & S/C & E/F Protection					
	Automation of ATS					

	BUSBAR OF FEEDER - CABLE TERMINATION DIRECT TO SPREADERS					
(ii)	Outgoing					
	Busbar will be of Aluminium, Bus bar 500 Amp Size 50x10x1x3.5 R					
	Supplying, Installation, Testing and Commissioning of outdoor double door Panel comprising of Automatic Transfer Switch The Panel shall be compartmentalized type having space and arrangement for incoming and outgoing cables/bus ducting, switchgear, insulated and properly supported compartmentalized bus-bars, interconnection between bus bars and switchgear with auxiliary bus bars/insulated conductors/strips etc. It shall be fabricated in 14G/16G CRCA sheet, (750+450)H X 750L X 350 D angle duly painted with Siemens Grey Powder Coated paint, Assembly Charges of 400A 4 strip Aluminium Busbar (Vertical) & Earth strip throughout the length of Panel (current density of Aluminium Busbar shall be 1mmx1mm=1.0 Amp.) Aluminium shall be Electric Grade E-91E, Busbar supports shall be DMC epoxy Insulators. All Busbars Links shall be covered/ insulated with Heat Shrinkable sleeves of coloured coded Red, Yellow, Blue & Black. Approximate Size of Panel H- (750+450)H X 750L X 350 D . Assembly Charges of Aluminium/Copper solid/ Copper flexible wire interconnection Busbar to ACB/ SWITCH & ACB/ SWITCH to field side for Cable termination duly covered/ insulated with Heat Shrinkable sleeves of coloured coded Red, Yellow, Blue & Black. All Interconnections of fields side are supported by conical, L & Finger type insulators of adequate size to support & sustain the weight of cables. Control Wiring with Copper Flexible Wire (size of control wire shall be 2.5 sq. mm copper flexible for C.T. Circuit & 1.0 sq. mm for Control & 1.0sq. mm for Scada Wiring) with thimbles printed sleeves, tie & belt etc. Assembly Charges of Accessories like Gasket, Doorlocks, Copper Flexible door earth, legend plates etc. Conforming IS :8623 Par-1 1993	1			P/Job	
3						
(i)						
	Change over switch 250 Amp					
	Automation of ATS					
	BUSBAR OF FEEDER - CABLE TERMINATION DIRECT TO SPREADERS					
(ii)						
	Busbar will be of Aluminium, Bus bar 300 Amp Size 30x10x1x3.5 R					
	Total					


 Executive Engineer
 Electrical Division
 HP PWD Palampur

SCHEDULE OF QUANTITY

NAME OF WORK: Providing and Fixing Campus Lighting and fixing of Security Lights in backside of Minister Block in Circuit House at Dharamshala		Job No. 9		ESTIMATED COST: Rs 3,16,066/-only. EARNEST MONEY: Rs.6400/-only TIME ALLOWED: One Month		
Sr. No.	DESCRIPTION	QTY.	RATES		UNIT	AMOUNT
			FIGURES	WORDS		
1	Providing and erection of LED Post Top 35 watt Street light luminaires powder coated pressure die-cast aluminium with heat resistant toughened glass including connections, testing and commissioning etc. as required.					
i)	LED Post Top light - 35 watt. Make:- Wipro (Cat. No. LP07-431-XXX-57-CL) / Bajaj/ Panasonic	10			Each	
2	Providing and erection of LED Post Top 60 watt Street light luminaires powder coated pressure die-cast aluminium with heat resistant toughened glass including connections, testing and commissioning etc. as required.					
i)	LED Post Top light - 60 watt. Make:- Wipro (Cat. No. LP05-711-XXX-65-XX) / Bajaj/ Panasonic	3			Each	
3	Supplying and fixing 6 A to 32 A rating, 240/415 V, 10 KA, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.					
i)	Single pole (Make:- Anchor/ Schneider/ Legrand/L&T)	10			Each	
4	Supplying and fixing Polycarbonate Box including din bar to fix MCB & Cable termination link, complete with fixing in the existing wall including making good the damages etc. as required complete in all respects. Make: Sintex or equivalent	10			Each	
5	Providing & Laying of one number aluminium conductor, PVC insulated and PVC sheathed unarmoured/ XLPE power cable, 1.1 KV grade of following sizes on wall surface as required.					
i)	Un Armoured cable 4 sq. mm (twin core)	700			P/Mtr	

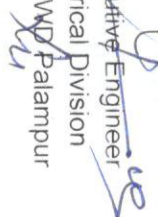
6	Providing & Laying of one number aluminium conductor, PVC insulated and PVC sheathed armoured/ XLPE power cable, 1.1 KV grade of following sizes direct in ground including excavation and refilling the trench etc as required, but excluding sand cushioning and protective covering.					
	Armoured cable 6 sq. mm (Twin core)	95			P/Mtr	
7	Providing & Laying of one number aluminium conductor, PVC insulated and PVC sheathed armoured/ XLPE power cable, 1.1 KV grade of following sizes on wall surface as required.					
	Armoured cable 6 sq. mm (twin core)	24			P/Mtr	
	Total					


 Executive Engineer
 Electrical Division
 HP PWD Palampur

SCHEDULE OF QUANTITY						
NAME OF WORK: Providing and Fixing Flood Lights in Police Ground Sai Ground, and Running Operation of E.L. to HPCA Cricket Stadium Dharamshala during Hon'ble Prim Minister tour (National Conference of Chief Secretaries)			Job No. 10		ESTIMATED COST: Rs 1,30,234/-only. EARNEST MONEY: Rs.2600/-only TIME ALLOWED: One Month	
Sr. No.	DESCRIPTION	QTY.	RATES		UNIT	AMOUNT
			FIGURES	WORDS		
1	Providing and erection of LED Flood Light 90 watt Street light luminaires powder coated pressure die-cast aluminium with heat resistant toughened glass including connections, testing and commissioning etc. as required.					
i)	LED Flood light - 90 watt. Make:- Panasonic (Cat. No. PFLM18908) / Bajaj/Jaquar	6			Each	
2	Providing & Laying of PVC insulated/Unsheathed cable solid aluminium conductor, 1.1 KV grade of following sizes on surface as required. Complete in all respect					
i)	solid aluminium conductor cable 10 sq. mm (Plate twin core)	400			P/Mtr	
3	Supplying and fixing two module stepped type electronic fan regulator on the existing modular plate switch box including connections but excluding modular plate etc. as required.	4			Each	
4	Supplying and fixing E-14 and E-27 LED Bulb Complete in all respect as required					
i)	E-14 LED Bulb 3 watt	3			Each	
ii	E-27 LED Bulb 5 watt	3			Each	
iii	E-27 LED Bulb 14 watt	5			Each	
Make :- Wipro or its equivalent						

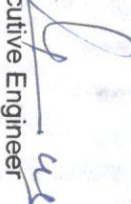
SCHEDULE OF QUANTITY						
NAME OF WORK: Providing and Fixing Flood Lights in Police Ground Sai Ground, and Running Operation of E.L. to HPCA Cricket Stadium Dharamshala during Hon'ble Prim Minister tour (National Conference of Chief Secretaries)			Job No. 10		ESTIMATED COST: Rs 1,30,234/-only. EARNEST MONEY: Rs.2600/-only TIME ALLOWED: One Month	
Sr. No.	DESCRIPTION	QTY.	RATES		UNIT	AMOUNT
			FIGURES	WORDS		
1	Providing and erection of LED Flood Light 90 watt Street light luminaires powder coated pressure die-cast aluminium with heat resistant toughened glass including connections, testing and commissioning etc. as required.					
i)	LED Flood light - 90 watt. Make:- Panasonic (Cat. No. PFLM18908) / Bajaj/Jaquar	6			Each	
2	Providing & Laying of PVC insulated/Unsheathed cable solid aluminium conductor, 1.1 KV grade of following sizes on surface as required. Complete in all respect					
i)	solid aluminium conductor cable 10 sq. mm (Plate twin core)	400			P/Mtr	
3	Supplying and fixing two module stepped type electronic fan regulator on the existing modular plate switch box including connections but excluding modular plate etc. as required.	4			Each	
4	Supplying and fixing E-14 and E-27 LED Bulb Complete in all respect as required					
i)	E-14 LED Bulb 3 watt	3			Each	
ii	E-27 LED Bulb 5 watt	3			Each	
iii	E-27 LED Bulb 14 watt	5			Each	
Make :- Wipro or its equivalent						

5	Running Operation of E.I. to HPCA Cricket Stadium Dharamshala during Hon'ble Prim Minister(National Conference of Chief Secretaries)	1				p/Job	
	Total						


 Executive Engineer
 Electrical Division
 HP PWD Palampur

DRAFT SCHEDULE OF QUANTITY

NAME OF WORK: R/M of EI to various Govt. Non residential building in Distt. Kangra under Electrical Sub-Division HP PWD Palampur Distt. Kangra (HP) w.e.f. 2022-23.			Job No. 11		ESTIMATED COST: Rs. 2,61,856/-only. EARNEST MONEY: Rs. 5300/-only TIME ALLOWED: One year	
Sr. No.	DESCRIPTION	QTY.	RATES		UNIT	AMOUNT
			FIGURES	WORDS		
1	Engagement of temporary basis of Computer operator in the Office of Executive Engineer, Electrical Division, HPPWD Palampur during working hours (10.00 a.m. to 5.00 p.m.) or as & when required by the office in charge.	334			Per Job	
	Total					
Terms & condition						
1	The agency shall have to provide services as required in schedule of work.					
2	The services is required during normal working hours i.e. 10.00 AM to 5.00 PM or as required.					
3	The services have to be provided as per direction of office in-charge.					
4	The agency shall have to pay /provided minimum wages / rest / holiday as per HP State Govt.labour norms applicable for daily paid					
5	Nothing extra shall have to pay / issued on account of liberies, T&P soap,duster etc.					
6	The services are required temporarily and can be terminated at any time without assigning any reason.					
7	Nothing extra shall have to paid for absent period.					
8	Nothing extra shall be made on monthly basis.					
9	The staff shall have to report daily to concerned office in-charge.					
10	Period of service depends upon the requirement of work and can be increased /decreased / terminated without assigning any reason.					
11	The worker should be fully insured.					


Executive Engineer
 Electrical Division
 HP PWD Palampur

SCHEDULE OF QUANTITY

NAME OF WORK: C/O Govt Senior Secondary School Building at Sahla in Tehsil Bhattiyat and District Chamba (H.P.) Under RMSA (Sh:- Providing E.I. in 2 No. Classroom, Store, Verandah i.e Stair case.)			Job No. 12		ESTIMATED COST: Rs1,39,530/-only. EARNEST MONEY: Rs.2800/-only TIME ALLOWED: One Months	
Sr. No.	DESCRIPTION	QTY.	RATES		UNIT	AMOUNT
			FIGURES	WORDS		
			RATE			
1	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed steel conduit, with piano type switch, phenolic laminated sheet, suitable size MS box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc as required. Make: Anchor (Panta)/ SSK(Touch) or any other as approved by Engineer-in-Charge.					
	Group C.					
2	Wiring for circuit/sub-main with following size PVC insulated heat resistant flame retardant (HRRF) and low smoke single core (flexible) copper conductor cable in surface/recessed steel conduit along with 1 No.HRRF/SSK/PVC insulated single core copper conductor cable of same size for earthing as required. Make: KEI/Plaza/Anchor	32			Per point	
	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	30			Per metre	
	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	20			Per metre	
	2 X 6 sq. mm + 1 X 6 sq. mm earth wire	2			Per metre	
3	Supplying and drawing following size of PVC insulated, heat resistant, flame retardant (HRRF) and low smoke single core (flexible) copper conductor cable in existing surface / recessed, Steel/PVC conduit as required. Make:KEI/Plaza/Anchor					
i	3x2.5 Sq. mm.	8			Per metre	
4	Supplying and fixing metal box of 150mm X 75mm X 60mm deep (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in FRLSont including providing and fixing 3 pin 5/6 amps socket outlet and 5/6 amps piano type switch, connection, painting etc. as required. Make: Anchor (Panta)/ SSK(Touch)or any other as approved by Engineer-in-Charge.	2			Each	

5	Supplying and fixing metal box of 180mm X 100mm X 60mm deep (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in FRL Sont including providing and fixing 6 pin 5/6 & 15/16 amps socket outlet and 15/16 amps piano type switch, connection, painting etc. as required. Make: Anchor (Panta)/SSK(Touch) or any other as approved by Engineer-in-Charge.	2			Each	
6	Providing installation, Testing and commissioning of Ceiling Fan with step electronic fan regulator paino type, including wiring the down rod of standred length (up to 30 Cm) with 16/0.20 mm twin twisted fixible, cotton braided cable, including providing and fixing phenolic laminated sheet cover on the fan box and earthing etc. as required.					
	1200 mm sweep Make:- Usha (Emergia ISI 1 Star) / (Bajaj (Kassels 50 ISI) Anchor	8			Each	
7	Providing and fixing decorative extruded tube fixture having high quality design suitable for LED tube up to 20Watt (2000 lumen) 6500K and it should be compatible with specifications i.e. power factor ≥ 0.9 , harmonic distortion $\leq 10\%$ and efficacy ≥ 100 lumens per watt, CRI > 80 , suitable for input voltage AC 220-240V, 50/60 Hz, including one no. tube rod 20 Watt complete with all accessories, connections, testing and commissioning etc. as required.					
	Make:-Bajaj/Panasonic/Wipro.					
i	LED Tube Fixture 20Watt					
	Cat No: BCLAB 20W LED P					
8	Supplying and fixing surface mounting following size LED solution suitable for surface application with the use of the latest technology 6/12/18 Watt (600/1200/1800 lumen) 6500K and it should be compatible with specifications i.e. power factor ≥ 0.9 , harmonic distortion $\leq 10\%$ and efficacy ≥ 100 lumens per watt, CRI > 80 , suitable for input voltage AC 220-240V, 50/60 Hz complete with all accessories, connections, testing and commissioning etc. as required.	11			Each	
	Make:-Bajaj/Panasonic/ Wipro					
	LED 12 Watt Square	7			Each	
	Cat No: PPAM17127R1					
9	Providing and fixing Bulk Head Fiting with high efficacy up to 10Watt (1000 lumen) 6500K and it should be compatible with specifications i.e. power factor ≥ 0.9 , harmonic distortion $\leq 10\%$ and efficacy ≥ 100 lumens per watt, CRI > 80 , suitable for input voltage AC 220-240V, 50/60 Hz, including with all accessories, connections, testing and commissioning etc. as required as . Make:-Bajaj/Panasonic/ Wipro					

	LED Bulk head 10Watt Cat No: BIBWP 10W LED					
10	Supplying and fixing of following way, single pole and neutral sheet steel MCB distribution board, 240 volts, on surface / recess, complete with tinned copper bus-bar, wire-set, neutral link, earth bar, din-bar, detachable gland plate, blanking plate, cable, identification labels interconnections, phosphatized and powder painted, including earthing etc. as required:- (Make:- Anchor/ Legrand/ Schneider)	6			Each	
ii	Double door-12 way	1			Each	
11	Supplying and erection of 6 amps. to 32 amps. rating, 10 KA breaking capacity, 240 volts, 'C' curves, miniature circuit breaker of Single pole in the existing MCB DB complete with connections etc. as required:- Cat-A. (Make:- Anchor/ Legrand/ Schneider)	6			Each	
12	Supplying and fixing 40 Amps. rating, double pole (single phase & neutral) 240 volts, residual current circuit breaker (RCCB), having a sensitivity current up to 30 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required. (Make:- Anchor/ Legrand/ Schneider)	1			Each	
13	Supplying and fixing 40 Amps. rating, double pole, 240 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required : Cat-A. Make: Anchor, Legrand, Schneider.	1			Each	
14	Earthing with G.I. earth plate 600 mmx600 mmx 6 mm thick, including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt) as required.	1			Set	
15	Supplying and laying 6 SWG G.I. wire at 0.50 mtr. below ground level for earth electrode conductor, including soldering etc. as required.	20			Per metre	
	Total					

Executive Engineer
 Electrical Division
 HP PWD Palampur

SCHEDULE OF QUANTITY

NAME OF WORK: Construction of Public Parking (Shopping Complex) in
HPPWD Sub Division Holi In District Chamba (H.P) (S.H:-Providing E.I. therein).

Job No. 13

ESTIMATED COST: Rs2,90,120/-only.
EARNEST MONEY: Rs.5800/-only
TIME ALLOWED: One Months

Sr. No.	DESCRIPTION	QTY.	RATES		UNIT	AMOUNT
			FIGURES	WORDS		
			RATE			
1	Wiring for light point / fan point / exhaust fan / call bell point with 1.5 Sq. mm. PVC insulated heat resistant flame retardant (HFRF) and low smoke single core (flexible) copper conductor cable in surface/recessed steel conduit with modular switch, modular plates, suitable G.I. box and earthing the light point with 1.5 Sq.mm. HFRF/PVC insulated single core copper conductor cable as required.					
	Make:- Legrand (Myrius)/ Schneider(Livia)/Anchor Roma (Plus)					
	Group C.					
	Wiring for twin control light point with 1.5 Sq. mm. PVC insulated heat resistant flame retardant (HFRF) and low smoke single core (flexible) copper conductor cable in surface/recessed steel conduit with 2-way, 5/6 amps. modular switch, modular plates, suitable G.I. box and earthing the light point with 1.5 Sq.mm. HFRF/PVC insulated single core copper conductor cable as required.	28			Per point	
	Make:- Legrand (Myrius)/ Schneider(Livia)/Anchor Roma (Classic)					
	Group C.					
2	Wiring for circuit/sub-main with following size PVC insulated heat resistant flame retardant (HFRF) and low smoke single core (flexible) copper conductor cable in surface/recessed steel conduit along with 1 No.HFRF/PVC insulated single core copper conductor cable of same size for earthing as required. Make: Plaza/ KEI/ Polycab.	2			Per point	
	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire					
		60			Per metre	
	2 X 4 sq. mm + 1 X 4 sq. mm earth wire					
		64			Per metre	

	2 X 6 sq. mm + 1 X 6 sq. mm earth wire	65				Per metre	
3	Supplying and drawing following size of PVC insulated, heat resistant, flame retardant (HFR) and low smoke single core (flexible) copper conductor cable in existing surface / recessed, Steel/PVC conduit as required. Make: Plaza/ KEI/ Polycab.						
i	3x2.5 Sq. mm.						
4	Supplying and fixing G.I. Modular box of (140mmx78mmx50mm) size with modular plate and cover in recess including providing and fixing 5 pin 5/6 amps modular socket outlet and 5/6 amps, modular switch, connections etc. as required. Make:- Legrand (Myrius)/ Schneider(Livia)/Anchor Roma (Classic)	10				Per metre	
5	Supplying and fixing G.I. Modular box of (140mmx78mmx50mm) size with modular plate and cover in recess including providing and fixing 6 pin 15/16 amps modular socket outlet and 15/16 amps, modular switch, connections etc. as required. Make:- Legrand (Myrius)/Schneider(Livia) /Anchor Roma (Classic)	16				Each	
6	Providing and fixing decorative extruded tube fixture having high quality design suitable for LED tube up to 20Watt (2000 lumen) 6500K and it should be compatible with specifications i.e. power factor ≥ 0.9 , harmonic distortion $\leq 10\%$ and efficacy ≥ 100 lumens per watt, CRI > 80 , suitable for input voltage AC 220-240V, 50/60 Hz, including one no. tube rod 20 Watt complete with all accessories, connections, testing and commissioning etc. as required. Make:- Bajaj/Panasonic/Wipro.	8				Each	
i	LED Tube Fixture 20Watt						
	Cat No: BCLAB 20W LED P	2				Each	
7	Providing and installation of following type of surface mounting round type LED panel Light with aluminium die cast housing in white finish with anti glare polycarbonate diffuser and separated energy efficient constant current, nonintegral, electronic driver, suitable for input voltage: AC 220-240 V, 50/60Hz, complete with all accessories, connections, testing etc. as required. Make: Jaquar, Panasonic, Wipro or any other approved by Engineer-in-charge.						
	Make:- Bajaj/Panasonic/ Wipro						
	LED 12 Watt Round	10				Each	
	Cat No: PPAM16127R1						

	LED 18 Watt Round	16			Each	
	Cat No:PPAM16187R1					
8	Providing and erection of LED 45 watt Street light luminaries powder coated pressure die-cast aluminium SMake:-Jaquar/Panasonic/ Wipro/LED Street light with heat resistant toughened glass including connections, testing and commissioning etc; as required complete in all respects. Make:-Bajaj/Panasonic/ Wipro					
	LED Street Light, 45 Watt					
		2			each	
i	Cat No: PSTM27458					
9	Supplying and fixing of following way, single pole and neutral sheet steel MCB distribution board, 240 volts, on surface / recess, complete with tinned copper bus-bar, wire-set, neutral link, earth bar, din-bar, detachable gland plate, blanking plate, cable, identification labels interconnections, phosphatized and powder painted, including earthing etc. as required:- Make: Anchor, Legrand, Schneider.					
ii	Double door-6 way					
		8			Each	
10	Supplying and fixing 6 amps to 32 amps rating, 240/415 volts, 10 kA, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required. Make: Anchor, Legrand, Schneider.	16			Each	
11	Supplying and fixing 25 Amps. rating, double pole (single phase & neutral) 240 volts, residual current circuit breaker (RCCB), having a sensitivity current up to 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required:- Cat-A. Make: Anchor, Legrand, Schneider.	8			Each	
12	Supplying and fixing 40 Amps. rating, double pole, 240 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required : Cat-A. Make: Anchor, Legrand, Schneider.	8			Each	
13	Supplying and fixing 63 Amps. rating, double pole, 240 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required. (Make:- Anchor/Legrand/Schneider)	2			Each	

14	Supplying and fixing sheet metal bus-bar chamber suitable for 63 Amp. 415 volts capacity with 4 No. copper strip bus-bars each of length 450mm & cross-sectional area (16mmx3.17mm), enclosure made from 1.6 mm thick M.S. sheet having overall dimensions (530mmx350mmx150mm) nominal with all accessories including connections, earthing the body etc. as required:-Bharat, Goldmedel	2			Each	
15	Earthing with copper earth plate 600 mmx600 mmx 3 mm thick, including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. (but without charcoal or coke and salt) complete as required.	2			Set	
17	Supplying and laying 8 SWG Copper wire at 0.50 mtr. below ground level for earth electrode conductor, including soldering etc. as required.	50			Per metre	
Total						

Executive Engineer
Electrical Division
HP PWD Palampur

SCHEDULE OF QUANTITY

NAME OF WORK: Replacement of switchgear system into new one 2 No Suit for SRU Moti Tibba in Tehsil Dalhousie Distt. Chamba(H.P)

Job No. 15

ESTIMATED COST: Rs2,99,973/-only.
EARNEST MONEY: Rs.6000/-only
TIME ALLOWED: Six Months

Sr. No.	DESCRIPTION	QTY.	RATES		UNIT	AMOUNT
			FIGURES	WORDS		
			RATE			
1	Wiring for light point / fan point / exhaust fan / call bell point with 1.5 Sq. mm. PVC insulated heat resistant flame retardant (HRFR) and low smoke single core (flexible) copper conductor cable in surface/recessed steel conduit with modular switch, modular plates, suitable G.I. box and earthing the light point with 1.5 Sq.mm. HRFRLS/PVC Insulated single core copper conductor cable as required.					
	Make:- Legrand (Myrius)/ Schneider(Livia)/Anchor Roma (Plus)					
	Group C.					
2	Wiring for twin control light point with 1.5 Sq. mm. PVC insulated heat resistant flame retardant (HRFR) and low smoke single core (flexible) copper conductor cable in surface/recessed steel conduit with 2-way, 5/6 amps. modular switch, modular plates, suitable G.I. box and earthing the light point with 1.5 Sq.mm. HRFRLS/PVC insulated single core copper conductor cable as required.	42			Per point	
	Make:- Legrand (Myrius)/Schneider(Livia)/Anchor Roma (Plus)					
	Group c.					
		2			Per point	
3	Wiring for circuit/sub-main with following size PVC insulated heat resistant flame retardant (HRFR) and low smoke single core (flexible) copper conductor cable in surface/recessed steel conduit along with 1 No.HRFRLS/PVC insulated single core copper conductor cable of same size for earthing as required. Make KEI/Anchor/Plaza					
i	2x1.5 Sq. mm. + 1 X 1.5 sq. mm earth wire	20			Per metre	
ii	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	60			Per metre	
iii	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	64			Per metre	


v	2x10 Sq. mm.+ 1 X 10 sq. mm earth wire				Per metre	
4	Wiring for circuit / sub-main with 4x4 Sq. mm. PVC insulated heat resistant flame retardant (HRFR) and low smoke single core (flexible) copper conductor cable in surface/recessed steel conduit along with 2 No.4 Sq.mm. (4X4+2X4)HRFRLS/PVC insulated single core copper conductor cable for earthing as required.	4			Per metre	
5	Supplying and drawing following size of PVC insulated, heat resistant, flame retardant (HRFR) and low smoke single core (flexible) copper conductor cable in existing surface / recessed, Steel/PVC conduit as required.	32			Per metre	
	PVC insulated HRFR LS Copper conductor 1.5 Sq. mm.					
ii	3x2.5 Sq. mm.	24			Per metre	
6	Supplying and fixing G.I. Modular box of (140mmx78mmx50mm) size with modular plate and cover in recess including providing and fixing 5 pin 5/6 amps modular socket outlet and 5/6 amps. modular switch, connections etc. as required.	8			Each	
	Make:- Legrand (Myrius)/Schneider(Livia)/Anchor Roma (Plus)					
7	Supplying and fixing G.I. Modular box of (140mmx78mmx50mm) size with modular plate and cover in recess including providing and fixing 6 pin 15/16 amps modular socket outlet and 15/16 amps. modular switch, connections etc. as required.	8			Each	
	Make:- Legrand (Myrius)/Schneider(Livia)/Anchor Roma (Plus)					
8	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 2 nos. 3 pin 5/6 amps modular socket outlets and 2 nos 5/6 amps modular switches, connection etc. as required. (For light plugs to be used in non residential buildings).	2			Each	
	Make:- Legrand (Myrius)/Schneider(Livia)/Anchor Roma (Plus)					
9	Supplying & fixing of G.I. modular boxes of following sizes along with modular base and cover plate for modular switches in recess as required.					
	Make:- Legrand (Myrius)/Schneider(Livia)/Anchor Roma (Plus)					
	2 modules (78mmx78mmx50mm)	2			Each	
10	Supplying and fixing following rating Modular switch /socket in the existing switch box / cover plate including connections etc. as required.					
	Make:- Legrand (Myrius)/Schneider(Livia)/Anchor Roma (Plus)					
i	TV. socket outlet, modular	2			Each	

11	Supplying and drawing co-axial TV cable, RG-6 grade, 0.7mm (75 Ohms) copper conductor PE insulated, shielded with fine tinned copper braid and protected with PVC sheath in the existing surface / recessed, steel / PVC conduit as required. Make:- KEI/Anchor/Plaza	30			Per mtr	
12	Supplying and fixing of following sizes of PVC conduit along with the accessories in surface / recess including cutting the wall and making good the same in case of recessed conduit as required. Make:-Anchor/BEC/Diplast					
i	25 mm. dia					
13	Supplying and fixing Ding-Dong / Electronic musical bell, suitable for D.C./A.C. single phase, 230 volts complete as required:-	30			Per mtr	
14	Providing and installation of exhaust fan of following sizes in the existing opening, including making the hole to suit the size of the above fan, making good the damages, connections, testing and commissioning etc. as required:- Make Usha/Bajaj/Anchor	2			Each	
i	Exhaust Fan, Light duty, (Domestic) 300 mm sweep					
		4			Each	
15	Supplying and fixing surface mounting following size LED solution suitable for surface application with the use of the latest technology 6/12/18 Watt (600/1200/1800 lumen) 6500K and it should be compatible with specifications i.e. power factor ≥ 0.9 , harmonic distortion $\leq 10\%$ and efficacy ≥ 100 lumens per watt, CRI > 80 , suitable for input voltage AC 220-240V, 50/60 Hz complete with all accessories, connections, testing and commissioning etc. as required.					
	Make:-Bajaj/Panasonic/ Wipro					
i	LED 12 Watt Round	8			Each	
	Cat No: PPAM16127R1					
II	LED 18 Watt Round	8			Each	
	Cat No: PPAM16187R1					
16	Providing and fixing decorative extruded tube fixture having high quality design suitable for LED tube up to 20Watt (2000 lumen) 6500K and it should be compatible with specifications i.e. power factor ≥ 0.9 , harmonic distortion $\leq 10\%$ and efficacy ≥ 100 lumens per watt, CRI > 80 , suitable for input voltage AC 220-240V, 50/60 Hz, including one no. tube rod 20 Watt complete with all accessories, connections, testing and commissioning etc. as required.					
	Make:-Bajaj/Panasonic/Wipro.					

	LED Tube Fixture 20Watt						
i	Cat No: BCLAB 20W LED P	8				Each	
17	Supplying and fixing of fancy wall bracket suitable for input voltage: AC 220-240V, 50/60Hz, complete with all accessories, lamp holder, but excluding lamp including making connections, testing etc. as required: of Approved Make:- Jaguar/Philips/Bajaj						
i	Wall light fixture Polycarbonate Body, Suitable For 9 W retrofit LED lamp B22 base	2				Each	
18	Supplying and fixing bakelite batten/angle holder including connections etc. as required:-	4				Each	
19	Providing and fixing Bulk Head Fitting with high efficacy up to 10Watt (1000 lumen) 6500K and it should be compatible with specifications i.e. power factor ≥ 0.9 , harmonic distortion $\leq 10\%$ and efficacy ≥ 100 lumens per watt, CRI > 80 , suitable for input voltage AC 220-240V, 50/60 Hz, including with all accessories, connections, testing and commissioning etc. as required as Make:- Bajaj/Panasonic/ Wipro						
	LED Bulk head 10Watt Cat No: BIBWP 10W LED						
		4				Each	
20	Providing and erection of LED 45 watt Street light luminaries powder coated pressure die-cast aluminium Make:- Jaguar/Panasonic/ Wipro LED Street light with heat resistant toughened glass including connections, testing and commissioning etc. as required complete in all respects Make:- Bajaj/Panasonic/ Wipro						
	LED Street Light, 45 Watt						
		2				each	
	Cat No: PSTM27458						
21	Providing and fixing decorative extruded tube fixture having high quality design suitable for LED tube up to 10Watt (Mirror Light)(1000 lumen) 6500K and it should be compatible with specifications i.e. power factor ≥ 0.9 , harmonic distortion $\leq 10\%$ and efficacy ≥ 100 lumens per watt, CRI > 80 , suitable for input voltage AC 220-240V, 50/60 Hz, including one no. tube rod 10 Watt complete with all accessories, connections, testing and commissioning etc. as required Make:- Jaguar/Panasonic/ Wipro						
	Mirror light LED 10Watt						
		2				Each	
	Cat No: LL20-111-111-XXX-65NE3						

22	Supplying and fixing LED retrofit lamp suitable for B-22 holder base fittings with polycarbonate diffuser and aluminium heat sink as required complete in all respects.					
	9 Watt LED, B-22	4			Each	
	Makes:- Tisva (Cat.No.AL916611R 9W/ B22) /Panasonic / Osram.					
23	Supplying & fixing suitable size GI box with modular plate and cover in front on surface or in recess i/c providing and fixing 25 amp modular socket outlet and 25 Amps modular SP MCB, "C" curve including connection, painting etc. as Make:- Legrand (Myrius)/Schneider(Livia)/Anchor Roma (Plus)	2			Each	
24	Providing and installation of stationary storage type Electric water heater (Geyser) of various sizes by means of Expansion-bolts with nuts and washers, including embedding of expansion-bolts in the wall, providing and fixing of Non-return valve, Dead weight safety valve, 2 No C.P. connection rods 18" long, making good the damages, electrical connections, safety valve connections, testing and commissioning etc. as required:- Make:-Usha /Recold/Bajaj					
i	15 Liter capacity water heater (Cat-A)	2			Each	
ii	25 Liter capacity water heater (Cat-A)	2			Each	
25	Supplying and fixing of following way, single pole and neutral sheet steel MCB distribution board, 240 volts, on surface / recess, complete with tinned copper bus-bar, wire-set, neutral link, earth bar, din-bar, detachable gland plate, blanking plate, cable, identification labels interconnections, phosphatized and powder painted, including earthing etc. as required:- (Make:- Anchor/ Legrand/ Schneider)					
i	Double door-16 way	2			Each	
26	Supplying and erection of 6 amps. to 32 amps. rating, 10 KA breaking capacity, 240 volts, 'C' curves, miniature circuit breaker of Single pole in the existing MCB DB complete with connections etc. as required:- Cat-A. (Make:- Anchor/ Legrand/ Schneider)	18			Each	
27	Supplying and fixing 63 Amps. rating, double pole (single phase & neutral) 240 volts, residual current circuit breaker (RCCB), having a sensitivity current up to 300 miliampers in the existing MCB DB complete with connections, testing and commissioning etc. as required. (Make:- Anchor/ Legrand/ Schneider)	2			Each	

28	Supplying and fixing 63 Amps. rating, double pole, 240 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required. (Make:- Anchor/Legrand/Schneider)	2			Each	
29	Earthing with G.I. earth plate 600 mmx600 mmx 6 mm thick, including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt) as required.	1			Set	
30	Supplying and laying 6 SWG G.I. wire at 0.50 mtr. below ground level for earth electrode conductor, including soldering etc. as required.	50			Per metre	
	Total					


 Executive Engineer
 Electrical Division
 HP PWD Palampur

SCHEDULE OF QUANTITY


NAME OF WORK :- C/O 1 No. Type-IV Docter Atr. at PHC Dhameta in Teh- Fatehpur , Distt- Kangra (SH:- Providing EI there in)				15		ESTIMATED COST: Rs. 1,02,950/-only. EARNEST MONEY: Rs. 2100/-only TIME ALLOWED: One Year	
SR. NO.	DESCRIPTION	QTY.	FIGURES	RATES		UNIT	AMOUNT
				WORDS			
1	Wiring for light point / fan point / exhaust fan / call bell point with 1.5 Sq. mm. PVC insulated heat resistant flame retardant (HRRFR) and low smoke single core (flexible) copper conductor cable in surface/recessed steel conduit and earthing the light point with 1.5 Sq.mm. HRRFRLS/PVC insulated single core copper conductor cable as required.						
(i)	Group C.	23				Per Point	
2	Wiring for power plug with 2x4 Sq. mm. PVC insulated heat resistant flame retardant (HRRFR) and low smoke single core (flexible) copper conductor cable in surface/recessed PVC conduit along with 1 No.4 Sq.mm. HRRFRLS/PVC insulated single core copper conductor cable for earthing as required.	45				Per Meter	
3	Wiring for power plug with 4x4 Sq. mm. PVC insulated heat resistant flame retardant (HRRFR) and low smoke single core (flexible) copper conductor cable in surface/recessed PVC conduit along with 2 No.4 Sq.mm. HRRFRLS/PVC insulated single core copper conductor cable for earthing as required.	40				Per Meter	
4	Wiring for circuit/sub-main with following size PVC insulated heat resistant flame retardant (HRRFR) and low smoke single core (flexible) copper conductor cable in surface/recessed PVC conduit along with 1 No.HRRFRLS/PVC insulated single core copper conductor cable of same size for earthing as required.						
(i)	2x1.5 Sq. mm.	30				Per Meter	
(ii)	2x10 Sq. mm.	5				Per Meter	
5	Supplying and fixing following rating Plano-type switch /socket on the existing switch box / cover including connections etc. as required.						

(i)	S.P. 5/6 Amps one way switch, piano type.	6			Each	
(ii)	5 pin 5/6 Amps socket outlet, porcelain base/ piano type.	6			Each	
6	Supplying and fixing metal box of 180mmx100mmx60mm deep (nominal size) on surface/recess with suitable size phenolic laminated sheet cover in the front including providing and fixing 6 pin 15/16 amps socket outlet and 15/16 amps, piano type switch, connections, painting etc. as required.	6			Each	
7	Supplying and fixing bakelite batten/angle holder including connections etc. as required:-	2			Each	
8	Supplying and fixing call bell / buzzer, suitable for D.C./A.C. single phase, 230 volts complete as required:-	1			Each	
9	Supplying and erection of 6 amps. to 32 amps. rating, 10 KA breaking capacity, 240 volts, 'C' curves, miniature circuit breaker of following poles in the existing MCB DB complete with connections etc. as required:-					
(i)	Single pole. Cat-A.	8			Each	
10	Supplying and fixing following rating, double pole, 240 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.					
(i)	63 Amps. Cat-A.	1			Each	
11	Supplying and fixing following rating, double pole (single phase & neutral) 240 volts, residual current circuit breaker (RCCB), having a sensitivity current up to 300 milliampers in the existing MCB DB complete with connections, testing and commissioning etc. as required.					
(i)	40 Amps. Cat-A.	1			Each	

12	Supplying and fixing of following way, single pole and neutral sheet steel MCB distribution board, 240 volts, on surface / recess, complete with tinned copper bus-bar, wire-set, neutral link, earth bar, din-bar, detachable gland plate, blanking plate, cable, identification labels interconnections, phosphatized and powder painted, including earthing etc. as required:-					
(i)	Double door-12 way	1			Each	
13	Earthing with G.I earth pipe 4.5 mtr. long and 40mm dia, including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. (but without charcoal or coke and salt) complete as required.	1			Per set	
	Extra for using salt and charcoal for pipe earth electrode complete as required.	1			Per set	
14	Providing and fixing 6 SWG (4 mm dia.) G.I. wire on surface or in recess for loop earthing as required.	20			Per Meter	
15	Supplying & fixing following type of Surface mounted luminaires, white power coated CRCA housing diffuser to avoid glare, it should be compatible with specification i.e. Power Factor > 0.9, Harmonic Distortion < 20% and efficacy > 100 Lumens per watt, CRI rating > 70 suitable for input voltage: AC 220-240 V, 50 Hz, complete with all accessories, connections, testing and commissioning etc. as required. Make: C&S, Philips, Havells, Panasonic or any other approved by Engineer-in-charge.					
(i)	LED Batten 20W, 4 feet long Cat no. PBTM01207	6			Each	
16	Providing and Fixing Following type of LED Wall bracket light coated CRCA Sheet steel housing, diffuser to avoid glare, with specifications i.e. Power factor > 0.9, Harmonic distortion < 10% and efficacy > 100 lumens per watt, CRI > 80, suitable for input voltage AC 220-240v, 50/60 HZ complete with all accessories, including connections, testing and commissioning etc. as required complete in all respect prewired with stater trigger circuit, surge protection circuit lumen output of 100 lumens per watt complete with all accessories, connection testing and commissioning as required.					

	Chrome Finishing Wall Light 4 W x1	5			Each	
	Makes:-Jaquar, Panasonic, Changi, {at par with Jaquar cat no. KWB-CHR-MBB0471C)					
17	Providing and installation of Light Duty, plastic body, exhaust fan of following size in the existing opening by means of suitable rag-bolt/ nuts, including making the hole to suit the size of the above fan, making good the damages, connections, testing and commissioning etc. as required complete in all respects to the best satisfaction of Engineer-in-charge. Make: Havells, Bajaj, Crompton or any other equivalent as approved by Engineer-in-charge.					
	Exhaust Fan, Light duty, (Domestic) 250/300 mm sweep	2			Each	
	Makes:-Havells, Panasonic, Usha, Bajaj, Anchor By Panasonic, {at par with Havells Ventil Air DX White)					
18	Providing, Installation, testing and commissioning of ceiling fan with step type electronic fan regulator, including wiring the down rods of standard length (up to 30 cm) with 16/0.20 mm twin twisted flexible, cotton braided, copper cable, including providing and fixing phenolic laminated sheet cover on the fan box and earthing etc. as required:-					
	Ceiling Fan 1200 mm sweep. Category-A	5			Each	
19	Supplying and fixing following type of recess mounted square type LED downlighter of following rating with power coated CRCA housing with high power LED, diffuser to avoid glare, it should be compatible with specification i.e. power factor ≥ 0.9 , Harmonic Distortion $<20\%$ and efficiency ≥ 100 Lumens per watt, CRI rating > 70 suitable for input voltage: AC 220-240 V, 50 Hz, complete with all accessories, connections, testing and commissioning etc. as required. Make: Philips, Havells, Panasonic or any other approved by Engineer-in-Charge.					

	LED Downlighter 10 watt, (Make:- Panasonic) Equivalent	2			Each	
20	Supplying and fixing of following sizes of PVC conduit along with the accessories in surface / recess including cutting the wall and making good the same in case of recessed conduit as required:-					
	25 mm. dia	15			Per Meter	
21	Providing and installation of stationary storage type Electric water heater (Geyser) of various sizes by means of Expansion-bolts with nuts and washers, including embedding of expansion-bolts in the wall, providing and fixing of Non-return valve, Dead weight safety valve, 2 No C.P. connection rods 18" long, making good the damages, electrical connections, safety valve connections, testing and commissioning etc. as required:-					
	25 Liter capacity water heater (Cat-A)	1			Each	
	Total					


 Executive Engineer
 Electrical Division
 HPPWD Palampur

SCHEDULE OF QUANTITY

NAME OF WORK: Repair and Maintenance of Tower type A.C in ICU, Ward I, II and split AC in Dr. Duty room etc. installed in makeshift covid hospital Dr. RPGMC Kangra at Tanda for the year 2022-23.

Job No. 16

ESTIMATED COST: Rs 2,02,150/-only.
EARNEST MONEY: Rs.4100/-only
TIME ALLOWED: One Months

Sr. No.	DESCRIPTION	QTY.	RATES		UNIT	AMOUNT
			FIGURES	WORDS		
			RATE			
1	Repair & Maintenance (Routine and Preventive) of Tower Type Air-Conditioning Units 3.8 T.R. capacity (Panasonic/Daikin make) Hot & Cold including maintenance of accessories extra copper pipes with sleeves, wire, insulation and battens etc. with Drain Pipe, servicing, cleaning the filters, charging/topping up of refrigerant R-410A/R-32 Gas when required throughout the year, but excluding the replacement of the compressor of A.C. Units . The repair and maintenance has been done as per instructions and directions to the best satisfaction of Engineer-in-charge.	13			Each	
2	Repair & Maintenance (Routine and Preventive) of Split / window type Air-Conditioning Units of following capacity 2 T.R /1.5 T.R. capacity (LG/Panasonic/Voltas make) Hot & Cold including accessories extra copper pipes with sleeves, wire, insulation and battens etc. with Drain Pipe, servicing, cleaning the filters, charging/topping up of refrigerant/R-22 Gas when required throughout the year, but excluding the replacement of the compressor of A.C. Units . The repair and maintenance has been done as per instructions and directions to the best satisfaction of Engineer-in-charge.					
2.1	Split type A.C 1.5 T.R capacity	3			Each	
2.2	split type A.C 2.0 T.R capacity	2			Each	
2.3	window type A.C 2.0 T.R/1.5 T.R capacity	2			Each	
	Total					


Executive Engineer
 Electrical Division
 HP PWD Palampur

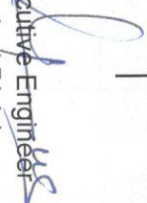
SCHEDULE OF QUANTITY

NAME OF WORK :- Providing and fixing of 3.5 kva ups Inverter in Minister Block Circuit House HPPWD at DharamshalaDistt Kangra (H.P.)

ESTIMATED COST: Rs.1,00,784/-only.
EARNEST MONEY: Rs. 2100/-only
TIME ALLOWED: One Month

SR. NO.	DESCRIPTION	QTY.	FIGURES	RATES	UNIT	AMOUNT
				WORDS		
1	Supplying, erection, testing & commissioning of Inverter having following capacity suitable for AC single phase input voltage standard range 110 V to 280 V and narrow range 180 V to 260 V 50 Hz and AC single phase input same as input on mains mode and 180 V to 230 V (+ 10 V) on inverter mode , pure sinewave microcontroller based design with automatic switchover from mains to inverter and inverter to mains with transfer time, 15 sec. efficiency on battery mode > 80% suitable for backup of power supply with One Year warranty as required complete in all respects and to the best satisfaction of Engineer-in Charge.					
	Microtek 3.5 KVA Jumbo UPS Inverter	1			Each	
	Makes:- Luminous/Microtek/Delta power/V-guard or any other make approved by Engineer-in-Charge.					
2	Supplying, erection, testing & commissioning of tall tubular Battery 12V 150Ah extra lead acid battery with thicker tubes suitable for inverter as required complete in all respects and to the best satisfaction of Engineer-in-Charge.					
	Battery 12V 150 AH.	3			Each	
	Makes:- Luminous/Microtek/Sukam/Exide/ Quanta or any other make approved by Engineer-in-Charge.					
3	Supplying and fixing the Rack for mounting 3 Nos 150Ah Battery as required complete in all respect.	1			Each	
4	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed steel conduit as required	20			Each	
	2 X 6 sq. mm + 1 X 6 sq. mm earth wire					

5	Supplying and fixing suitable size GI box with modular plate and cover in FRLSont on surface or in recess, including providing and fixing 6 pin 15/16 amps modular socket outlet and 15/16 amps modular switch, connection etc. as required. Make: Anchor (Roma)/ L&T or any other as approved by Engineer-in-Charge.	2			Each	
	Total					


 Executive Engineer
 Electrical Division
 HPPWD Palampur