

**BILL OF MATERIALS : STATION C&I PACKAGE FOR NCTPP- STAGE-II - ( 2 X 490 MW) - RATE SCHEDULE**

**GENERAL SCOPE OF WORK:**Unloading,receipt,verification,stacking at BHEL stores,transport to place of work,installation,alignment ,signal conditioining,precommissioining and commissioining assistance to BHEL. Also refer to itemwise details indicated against each equipment for details.Wherever dimensions and weights are indicated they are approximate & for information only.No upward / down ward rate revision is allowed in case of any change in dimensions/weights.For SOME of the bought out items the erection to be carried out under the respective euipment vendor's supervision and manpower assistance to be provided during commissioining and upto trial operation completion of C&I . **QUANTITIES ARE INDICATIVE ONLY AND MAY VARY INDIVIDUALLY / OVER ALL .Common items are covered under Unit 5.**

SR.NO	ITEM DESCRIPTION	Unit	Quantity			Unit Rate Rs	Amount in Rs	EQUIPMENT SUPPLIER SCOPE
			Unit 5	Unit 6	Total			
	PANELS:Panels may be in single/two/three or four suite formation.Work includes fixing canopy ( if applicable) .Panel installation is at UCR main plant AHP,CHP,CWPH,CT,TG ,Boiler AREA ,Switchyard etc.							
1.00	UNIT DCS SYSTEM PANELS EACH PANEL APPROXIMATE DIMENSIONS LXBXH=750X800X2415 MM	NO.	80	80	160			BHEL EDN SUPPLY
2.00	REMOTE I/O PANELS APPROXIMATE DIMENSIONS 750X800X2415 MM	NO.	12	12	24			do
3.00	STAND ALONE DCS PANELS APPROXIMATE DIMENSIONS 750X800X2415 MM	NO.	26	0	26			do
4.00	STAND ALONE SYSTEM REMOTE I/O PANELS APPROXIMATE DIMENSIONS 750X800X2415 MM	NO.	22	0	22			do
5.00	WATER SYSTEM DCS PANELS APPROXIMATE DIMENSIONS 750X800X2415 MM	NO.	17	0	17			do
6.00	WATER SYSTEM REMOTE I/O PANELS APPROXIMATE DIMENSIONS 750X800X2415 MM	NO.	2	0	2			do
7.00	ASH HANDLING PLANT DCS PANELS APPROXIMATE DIMENSIONS 750X800X2415 MM	NO.	22	0	22			do
8.00	ASH HANDLING REMOTE I/O PANELS APPROXIMATE DIMENSIONS 750X800X2415 MM	NO.	40	0	40			do
9.00	COAL HANDLING PLANT DCS PANELS APPROXIMATE DIMENSIONS 750X800X2415 MM	NO.	8	0	8			do
10.00	COAL HANDLING PLANT REMOTE I/O PANELS APPROXIMATE DIMENSIONS 750X800X2415 MM	NO.	14	0	14			do
11.00	RELAY PANELS APPROXIMATE DIMENSIONS 750X800X2415 MM	NO.	2	0	2			do
12.00	RELAY PANELS REMOTE I/O PANELS APPROXIMATE DIMENSIONS	NO.	6	0	6			do
13.00	ELECTRICAL CONTROL PANEL EACH PANEL LXBXH=750X800X2415 MM	NO.	2	2	4			do
14.00	NET WORK PANEL DCA-A (DC) LXBXH=750X800X2415 MM	NO.	1	1	2			do
15.00	NET WORK PANEL DCA-B (DC)LXBXH=750X800X2415 MM	NO.	1	1	2			do
16.00	NET WORK PANEL HMI (A&B) AC LXBXH=750X800X2415 MM	NO.	1	1	2			do

SR.NO	ITEM DESCRIPTION	Unit	Quantity			Unit Rate Rs	Amount in Rs	EQUIPMENT SUPPLIER SCOPE
			Unit 5	Unit 6	Total			
17.00	POWER DISTRIBUTION PANEL APPROXIMATE LXBXH=750X800X2415 MM	NO.	1	1	2			do
18.00	NET WORK PANEL HMI (A&B) DC AT WATER SYSTEM CONTROL ROOM LXBXH=750X800X2415 MM	NO.	1	0	1			do
19.00	NET WORK PANEL HMI (A&B) DC AT CW WATER SYSTEM CONTROL ROOM LXBXH=750X800X2415 MM	NO.	1	0	1			do
20.00	NET WORK PANEL HMI (A&B) DC AT MAKE UP WATER SYSTEM CONTROL ROOM	NO.	1	0	1			do
21.00	STATION LAN PANEL APPROXIMATE DIMENSIONS	NO.	2	0	2			do
	<b>CONTROL DESK: Assistance for Assembly,fixing and alignment to be provided to equipment Vendor.</b>							
22.00	UNIT CRT DESK WITH DRAWOUT TYPE CONSOLES APPROXIMATE DIMENSIONS W*H*D 6000X776X1200 MM	NO.	1	1	2			Supervision of assembly & installation in vendors scope
23.00	CONTROL DESK FOR STAND ALONE CONTROL SYSTEM -CW PUMP HOUSE APPROXIMATE DIMENSIONS W*H*D 4599X776X1050 MM	NO.	1	0	1			do
24.00	CONTROL DESK FOR WATER SYSTEM CONTROL ROOMAPPROXIMATE DIMENSIONS W*H*D 4599X776X1050 MM	NO.	1	0	1			do
25.00	CONTROL DESK FOR ASH HANDLING CONTRIOL ROOM APPROXIMATE DIMENSIONS W*H*D 4599X776X1050 MM	NO.	1	0	1			do
26.00	CONTROL DESK FOR COAL HANDLING CONTROL ROOM APPROXIMATE DIMENSIONS W*H*D 5578X776X1050 MM	NO.	1	0	1			do
27.00	CONTROL DESK FOR ASH WATER PUMP HOUSE CONTROL ROOM APPROXIMATE DIMENSIONS W*H*D 2541X776X1050 MM	NO.	1	0	1			do
28.00	CONTROL DESK FOR AIR CONDITIOINING SYSTEM APPROXIMATE DIMENSIONS W*H*D 3580X776X1050 MM	NO.	1	0	1			do
29.00	CONTROL DESK FOR MAKE UP WATER SYSTEM APPROXIMATE DIMENSIONS W*H*D 3580X776X1050 MM	NO.	1	0	1			do
30.00	RACK BEHIND LVS- UNIT CONTROL ROOM APPROXIMATE DIMENSIONS W*H*D 4032X1600X602 MM	NO.	1	1	2			do
31.00	RACK BEHIND LVS- COAL HANDLING PLANT CONTROL ROOM APPROXIMATE DIMENSIONS W*H*D 1742X1600X602 MM	NO.	1	0	1			do
32.00	RACK BEHIND LVS- ASH HANDLING PLANT CONTROL ROOM APPROXIMATE DIMENSIONS W*H*D 2360X1600X602 MM	NO.	1	0	1			do
33.00	WORK STATION FURNITURE FOR PC ROOM APPROXIMATE DIMENSIONS W*H*D 8400X1500X928 MM	NO.	1	0	1			do
34.00	WORK STATION FURNITURE FOR PROGRAMMER'S ROOM APPROXIMATE DIMENSIONS W*H*D 8400X1500X928 MM	NO.	1	0	1			do

SR.NO	ITEM DESCRIPTION	Unit	Quantity			Unit Rate Rs	Amount in Rs	EQUIPMENT SUPPLIER SCOPE
			Unit 5	Unit 6	Total			
35.00	INSTALLATION OF CHAIRS AT VARIOUS LOCATIONS	NO.	49	0	49			
36.00	WATER SYSTEM COMPUTER TABLE APPROXIMATE DIMENSIONS W*H*D 1505X735X760 MM	NO.	1	0	1			do
37.00	ASH HANDLING CONTROL ROOM COMPUTER TABLE APPROXIMATE DIMENSIONS W*H*D 1505X735X760 MM	NO.	1	0	1			do
38.00	COAL HANDLING WATER CONTROL ROOM COMPUTER TABLE APPROXIMATE DIMENSIONS W*H*D 1505X735X760 MM	NO.	1	0	1			do
39.00	SHIFT MAINTENANCE ENGINEERS TABLE APPROXIMATE DIMENSIONS W*H*D 1505X735X760 MM	NO.	1	0	1			do
40.00	CW PUMP CONTROL ROOM COMPUTER TABLE APPROXIMATE DIMENSIONS W*H*D 1505X735X760 MM	NO.	1	0	1			do
41.00	MAKE UP WATER CONTROL ROOM COMPUTER TABLE APPROXIMATE DIMENSIONS W*H*D 1505X735X760 MM	NO.	1	0	1			do
42.00	ASH WATER PUMP HOUSE CONTROL ROOM COMPUTER TABLE APPROXIMATE DIMENSIONS W*H*D 1505X735X760 MM	NO.	1	0	1			do
43.00	AC PLANT CONTROL ROOM COMPUTER TABLE APPROXIMATE DIMENSIONS W*H*D 1505X735X760 MM	NO.	1	0	1			do
	<b>PC STATIONS MIMPIS STATION</b>							
44.00	MAX OPERATOR WORK STATION PC COMPRISING CPU,MONITOR,KEY BOARD AND MOUSE	NO.	3	3	6			BHEL EDN SUPPLY
45.00	MAX OPERATOR WORK STATION PC FOR LVS COMPRISING CPU,KEY BOARD AND MOUSE (excludes monitor)	NO.	4	4	8			LVS VENDOR SUPPLY.COMMISSIONING IN VENDORS SCOPE.
46.00	MAX LINK STATION PC COMPRISING CPU,MONITOR,KEY BOARD AND MOUSE	NO.	1	1	2			BHEL EDN SUPPLY
47.00	PC STATIONS COMPRISING CPU,MONITOR,KEY BOARD AND MOUSE	NO.	3	3	6			DO
48.00	COLOUR LASER JET PRINTER A4 SIZE	NO.	3	3	6			DO
	<b>COMMON DCS SYSTEM</b>							
49.00	ENGINEER WORK STATION PC COMPRISING CPU,MONITOR,UPS	NO.	1	0	1			DO
50.00	MAX STORIAN STATION PC COMPRISING CPU,MONITOR,UPS	NO.	1	0	1			DO
51.00	MAX OPERATOR WORK STATION PC COMPRISING CPU,MONITOR,KEY BOARD AND MOUSE AT CWPH	NO	2	0	2			DO
52.00	MAX OPERATOR WORK STATION PC COMPRISING CPU,MONITOR,KEY BOARD AND MOUSE AT AC PLANT CONTROL ROOM	NO.	2	0	2			DO

SR.NO	ITEM DESCRIPTION	Unit	Quantity			Unit Rate Rs	Amount in Rs	EQUIPMENT SUPPLIER SCOPE
			Unit 5	Unit 6	Total			
53.00	MAX OPERATOR WORK STATION PC COMPRISING CPU,MONITOR,KEY BOARD AND MOUSE AT CONDENSATE POLISHING UNIT	NO.	1	0	1			DO
54.00	COLOUR LASER JET PRINTER A4 SIZE	NO.	2	0	2			DO
	<b>WATER SYSTEM</b>							
55.00	ENGINEER WORK STATION PC COMPRISING CPU,MONITOR,KEY BOARD,,MOUSE & UPS	NO.	1	0	1			DO
56.00	MAXSTORIAN PC COMPRISING CPU,MONITOR,KEY BOARD , MOUSE & UPS	NO.	1	0	1			DO
57.00	MAX OPERATOR STATION PC COMPRISING CPU,MONITOR ,KEY BOARD & MOUSE	NO.	3	0	3			DO
58.00	COLOUR LASER JET PRINTER A4 SIZE	NO.	1	0	1			DO
59.00	LINE DOT MATRIX PRINTER A3 SIZE	NO.	1	0	1			DO
	<b>WATER MAKE UP SYSTEM</b>							
60.00	ENGINEER WORK STATION PC COMPRISING CPU,MONITOR,KEY BOARD,,MOUSE & UPS	NO.	1	0	1			DO
61.00	MAXSTORIAN PC COMPRISING CPU,MONITOR,KEY BOARD , MOUSE & UPS	NO.	1	0	1			DO
62.00	MAX OPERATOR STATION PC COMPRISING CPU,MONITOR ,KEY BOARD & MOUSE	NO.	2	0	2			DO
63.00	COLOUR LASER JET PRINTER A4 SIZE	NO.	1	0	1			DO
	<b>ASH HANDLING SYSTEM</b>							
64.00	ENGINEER WORK STATION PC COMPRISING CPU,MONITOR,KEY BOARD,,MOUSE & UPS	NO.	1	0	1			DO
65.00	MAXSTORIAN PC COMPRISING CPU,MONITOR,KEY BOARD , MOUSE & UPS	NO.	1	0	1			DO
66.00	MAX OPERATOR STATION PC COMPRISING CPU,MONITOR ,KEY BOARD & MOUSE	NO.	5	0	5			DO
67.00	COLOUR LASER JET PRINTER A4 SIZE	NO.	2	0	2			DO
68.00	MAX OPERATOR WORK STATION PC FOR LVS COMPRISING CPU,KEY BOARD & MOUSE	NO	2	0	2			LVS VENDOR SUPPLY.COMMISSIOINING IN VENDORS SCOPE.
	<b>COAL HANDLING SYSTEM</b>							
69.00	ENGINEER WORK STATION PC COMPRISING CPU,MONITOR,KEY BOARD,,MOUSE & UPS	NO.	1	0	1			BHEL EDN SUPPLY
70.00	MAX STORIAN PC COMPRISING CPU,MONITOR,KEY BOARD , MOUSE & UPS	NO.	1	0	1			DO
71.00	MAX OPERATOR STATION PC COMPRISING CPU,MONITOR ,KEY BOARD & MOUSE	NO.	2	0	2			DO

SR.NO	ITEM DESCRIPTION	Unit	Quantity			Unit Rate Rs	Amount in Rs	EQUIPMENT SUPPLIER SCOPE
			Unit 5	Unit 6	Total			
72.00	COLOUR LASER JET PRINTER A4 SIZE	NO.	1	0	1			DO
73.00	MAX OPERATOR WORK STATION PC FOR LVS COMPRISING CPU,KEY BOARD & MOUSE	NO	3	0	3			DO
74.00	COLOUR LASER JET PRINTER A3 SIZE	NO.	1	0	1			DO
75.00	LINE DOT MATRIX PRINTER A3 SIZE	NO.	1	0	1			DO
76.00	SHIFT CHARGE PC STATION COMPRISING CPU,MONITOR,MOUSE,KEYBOARD & UPS	NO.	1	0	1			DO
77.00	SHIFT CHARGE PC STATION COMPRISING CPU,MONITOR,MOUSE,KEYBOARD & UPS (MAIN CONTROL ROOM)	NO	1	0	1			DO
78.00	STATION LAN SERVER PC COMPRISING CPU,MONITOR,MOUSE,KEYBOARD & UPS (MAIN CONTROL ROOM)	NO.	2	0	2			DO
	<b>LAN PCS</b>							
79.00	PC STATIONS-LAN COMPRISING CPU,MONITOR,KEY BOARD ,MOUSE & .THESE PCS ARE TO BE INSTALLED AT VARIOUS LOCATIONS IN THE DADRI POWER PLANT.	NO.	10	0	10			DO
80.00	COLOR LASER JET PRINTER A 4 SIZE INSTALLATION AT VARIOUS LOCATIONS AT POWER PLANT	NO	11	0	11			DO
81.00	COLOR LASER JET PRINTER A 3 SIZE (PROGRAMMER PRINTER)	NO.	1	0	1			
82.00	GATEWAY PC STATION COMPRISING CPU,MONITOR,KEY BOARD,MOUSE & UPS	NO.	1	0	1			
83.00	<b>OPTIC FIBER CABLE LAYING</b> ON CABLE TRAYS,THROUGH CONDUITS ,DIRECT BURIED AS APPLICABLE.(FOR DIRECT BURIED CABLE TRENCH MAKING / ROAD CROSSING SEPERATELY INDICATED UNDER SR, NO. 159 & 160)	MTR	60,000	20,000	80,000			LAYING UNDER SUPERVISION OF VENDOR.TERMINATION BY VENDOR
84.00	LARGE VIDEO SCREEN (LVS) INSTALLATION AT MAIN CONTRIOL ROOM ,ASH HANDLING PLANT CONTROL ROOM,CHP,CWPH ETC	NO	15	10	25			ERECTION SUPERVISION & COMMISSIONING IN LVS VENDOR SCOPE.
85.00	GRAPHICAL INTERFACE UNIT 10.4 INCH LCD SCREEN MOUNTED IN A IP 65 CABINET	NO	37	0	37			ERECTION SUPERVISION & COMMISSIONING IN GIU VENDOR SCOPE.
86.00	PRESSURE TRANSMITTER / DIFF PRESSURE TRANSMITTER/FLOW TRANSMITTER/LEVEL TRANSMITTER fixing in LIE/LIR/AS REQUIRED	NO.	303	301	604			
87.00	GUIDED WAVE RADAR TYPE LEVEL TRANSMITTER	NO.	15	15	30			
88.00	TEMPERATURE TRANSMITTERS-SINGLE INPUT DIN-RAIL MOUNTED	NO.	850	500	1,350			

SR.NO	ITEM DESCRIPTION	Unit	Quantity			Unit Rate Rs	Amount in Rs	EQUIPMENT SUPPLIER SCOPE
			Unit 5	Unit 6	Total			
89.00	TEMPERATURE TRANSMITTERS -DUAL INPUT WITH INDICATOR	NO	250	150	400			
	<b>UPS:All interconnections within UPS panels,ACDB Battery etc ,Acid/alkali filling for batteries,charging/ discharging of battery,load test of UPS . Commissioning assistance to vendor.Location of Main UPS is at Main plant TG room building .Other UPS at off site control rooms distributed at control rooms of like CHP,AHP,CWPH,DM Plant PTCW,AWRS ,Ash Silo ,Service Building etc .</b>							SUPERVISION OF ERECTION & COMMISSIONING UNDER UPS / BATTERY VENDOR SCOPE
90.00	UNINTERRUPTIBLE POWER SUPPLY SYSTEM <b>RATING 90 KVA (UPS)</b> COMPRISING 5 PANELS ,I/O ISOLATION TRANSFORMER 1 &2(WT.OF EACH PANEL 1000KG)+UPS(INV.+RECT) 1&2 (WT.OF EACH PANEL 1500 KG)+SCVS (WT.OF EACH PANEL 1000 KG) APPROXIMATE DIMENSION 7000(L)X 950(D) X 2415 (H) MM + ACDB1 &2 (WT.OF EACH PANEL 1000 KG) DIMENSION APPROXIMATE 4000X950X2415 MM .WITH ALL INTER CONNECTION BETWEEN BATTERY, UPS & BETWEEN UPS PANELS. AND <b>BATTERY FOR ABOVE UPS</b> COMPRISING APPROXIMATE 291 CELLS OF KPH430P.EACH CELL DIMENSION APPROX 261 MM (L)X 195 MM (W)X 405 MM (H) APPROX WT. PER CELL 35 KG	SET	1	1	2			DO
91.00	UNINTERRUPTIBLE POWER SUPPLY SYSTEM <b>RATING 80 KVA (UPS)</b> COMPRISING 5 PANELS ,I/O ISOLATION TRANSFORMER 1 & 2 (WT.OF EACH PANEL 1000KG)+UPS(INV.+RECT) 1&2 (WT.OF EACH PANEL 1500 KG)+SCVS (WT.OF EACH PANEL 1000 KG) APPROXIMATE DIMENSION 7000(L)X 950(D) X 2415 (H) MM + ACDB1 &2 (WT.OF EACH PANEL 1000 KG) DIMENSION APPROXIMATE 4000X950X2415 MM .WITH ALL INTER CONNECTION BETWEEN BATTERY, UPS & BETWEEN UPS PANELS. AND <b>BATTERY FOR ABOVE UPS</b> COMPRISING APPROXIMATE 291 CELLS OF KPH330P.EACH CELL DIMENSION APPROX 261 MM (L)X 195 MM (W)X 405 MM (H) APPROX WT. 35 KG PER CELL	SET	1	1	2			
	<b>UPS WITH ACDB -FOR OFFSITE AND REMOTE I/O SYSTEMS- OF RATINGS</b>							
92.00	<b>25 KVA UPS WITH ACDB</b> -DIMENSION OF 3 PANELS APPROX DIMENSIONS & WEIGHT 3000MM X 950 MM X 2415 MM ,2500 KG FOR OFFSITE AND REMOTE I/O SYSTEMSWITH ALL INTER CONNECTION BETWEEN BATTERY, UPS & BETWEEN UPS PANELS. AND <b>BATTERY FOR 25 KVA UPS</b> -COMPRISING APPROXIMATE 291 CELLS OF KPH120P.EACH CELL DIMENSION APPROX 105 MM (L)X 140 MM (W)X 365 MM (H),APPROX WEIGHT EACH CELL 9.50 KG	SET	2	0	2			DO
93.00	<b>20 KVA UPS WITH ACDB</b> -DIMENSION OF 3 PANELS APPROX DIMENSIONS & WEIGHT 3000MM X 950 MM X 2415 MM ,2500 KG FOR OFFSITE AND REMOTE I/O SYSTEMS AND <b>BATTERY FOR 20 KVA UPS</b> -COMPRISING APPROXIMATE 291 CELLS OF KPH100P.EACH CELL DIMENSION APPROX 105 MM (L)X 140 MM (W)X 365 MM (H)APPROX WEIGHT EACH CELL 9 KG	SET	1	0	1			DO

SR.NO	ITEM DESCRIPTION	Unit	Quantity			Unit Rate Rs	Amount in Rs	EQUIPMENT SUPPLIER SCOPE
			Unit 5	Unit 6	Total			
94.00	<b>15 KVA UPS WITH ACDB</b> -DIMENSION OF 3 PANELS APPROX DIMENSIONS & WEIGHT 3000MM X 950 MM X 2415 MM ,2500 KG FOR OFFSITE AND REMOTE I/O SYSTEMS WITH ALL INTER CONNECTION BETWEEN BATTERY, UPS & BETWEEN UPS PANELS. AND <b>BATTERY FOR 15 KVA UPS</b> -COMPRISING APPROXIMATE 291 CELLS OF KPH75P.EACH CELL DIMENSION APPROX 75 MM (L)X 140 MM (W)X 365 MM (H) WEIGHT EACH CELL 7 KG	SET	2	0	2			DO
95.00	<b>10 KVA UPS WITH ACDB</b> -DIMENSION OF 3 PANELS APPROX DIMENSIONS & WEIGHT 3000MM X 950 MM X 2415 MM ,2500 KG FOR OFFSITE AND REMOTE I/O SYSTEMS WITH ALL INTER CONNECTION BETWEEN BATTERY, UPS & BETWEEN UPS PANELS. AND BATTERY FOR 10 KVA UPS-COMPRISING APPROXIMATE 291 CELLS OF KPH75P.EACH CELL DIMENSION APPROX 75 MM (L)X 140 MM (W)X 365 MM (H) WEIGHT EACH CELL 5 KG	SET	6	0	6			DO
	<b>24 V DC SUPPLY SYSTEM : All interconnections ,arranging load testing ,Commissioining assistance to vendor for battery charging/discharging and load testing.Location of Main BOP Charger&amp; battery is at Main plant TG room building .Other Charger &amp; Battery at off site control rooms distributed at control rooms of like CHP,AHP,CWPH,DM Plant PTCW,AWRS ,Ash Silo ,Service Building etc .</b>							SUPERVISION of ERECTION & COMMISSIOINING in CHARGER/ BATTERY VENDORS SCOPE.
96.00	24 V DC 1525 AMPS CHARGER FOR BOP COMPRISING INPUT ISOLATION TRANSFORMER & RECTIFIER - 4 PANELS EACH PANEL APPROX 1000 KGS AND DIMENSION 1200MM X 950 MM X 2415 MM PLUS DCDB I AND II EACH PANEL WEIGHT APPROX 400 KGS AND DIMENSION 1200MM X 950 MM X 2415 MM.	SET	1	1	2			DO
96.01	BATTERY FOR 24 V DC BOP CHARGER COMPRISING 20 CELLS OF 2265 AH APPROXIMATE WEIGHT OF EACH CELL 58 KG & DIMENSION OF EACH CELL 430 MM X 195 MM X 405 MM	SET	2	2	4			
97.00	24 V DC 50 AMPS CHARGER COMPRISING INPUT ISOLATION TRANSFORMER & RECTIFIER - 2 PANELS EACH PANEL APPROX 800 KGS AND DIMENSION 950MM X 950 MM X 2415 MM PLUS DCDB I AND II EACH PANEL WEIGHT APPROX 200 KGS AND DIMENSION 800MM X 950 MM X 2415 MM AND BATTERY FOR 24 V DC 50 AMPS CHARGER COMPRISING <b>2X20 CELLS OF 75 AH</b> , APPROXIMATE WEIGHT OF EACH CELL 7 KG & DIMENSION OF EACH CELL 75 MM X 139 MM X 361 MM	SET	4	0	4			DO

SR.NO	ITEM DESCRIPTION	Unit	Quantity			Unit Rate Rs	Amount in Rs	EQUIPMENT SUPPLIER SCOPE
			Unit 5	Unit 6	Total			
98.00	24 V DC 70 AMPS CHARGER COMPRISING INPUT ISOLATION TRANSFORMER & RECTIFIER - 2 PANELS EACH PANEL APPROX 600 KGS AND DIMENSION 950MM X 950 MM X 2415 MM PLUS DCDB I AND II EACH PANEL WEIGHT APPROX 200 KGS AND DIMENSION 800MM X 950 MM X 2415 MM AND BATTERY FOR 24 V DC 70 AMP CHARGER COMPRISING 2 X 20 CELLS OF 100 AH , APPROXIMATE WEIGHT OF EACH CELL 9 KG & DIMENSION OF EACH CELL 105 MM X 139 MM X 361 MM	SET	1	0	1			DO
99.00	24 V DC 140 AMPS CHARGER COMPRISING INPUT ISOLATION TRANSFORMER & RECTIFIER - 2 PANELS EACH PANEL APPROX 600 KGS AND DIMENSION 950MM X 950 MM X 2415 MM PLUS DCDB I AND II EACH PANEL WEIGHT APPROX 200 KGS AND DIMENSION 800MM X 950 MM X 2415 MM POWER SYSTEM ALONGWITH DCDB AND BATTERY FOR 24 V DC 140 A CHARGER COMPRISING <b>2 X 20 CELLS OF 200 AH</b> , APPROXIMATE WEIGHT OF EACH CELL 17 KG & DIMENSION OF EACH CELL 156 MM X 165 MM X 361 MM	SET	1	0	1			DO
100.00	24 V DC 180 AMPS CHARGER COMPRISING INPUT ISOLATION TRANSFORMER & RECTIFIER - 2 PANELS EACH PANEL APPROX 600 KGS AND DIMENSION 950MM X 950 MM X 2415 MM PLUS DCDB I AND II EACH PANEL WEIGHT APPROX 200 KGS AND DIMENSION 800MM X 950 MM X 2415 MM POWER SYSTEM ALONGWITH DCDB- AND BATTERY FOR 24 V DC BOP CHARGER COMPRISING <b>2x 20 CELLS OF 265 AH</b> , APPROXIMATE WEIGHT OF EACH CELL 23 KG & DIMENSION OF EACH CELL 176 MM X 195MM X 405 MM	SET	2		2			DO
101.00	24 V DC 220 AMPS CHARGER COMPRISING INPUT ISOLATION TRANSFORMER & RECTIFIER - 2 PANELS EACH PANEL APPROX 600 KGS AND DIMENSION 950MM X 950 MM X 2415 MM PLUS DCDB I AND II EACH PANEL WEIGHT APPROX 200 KGS AND DIMENSION 800MM X 950 MM X 2415 MM AND BATTERY FOR 24 V DC BOP CHARGER COMPRISING <b>2 X 20 CELLS OF 315 AH</b> , APPROXIMATE WEIGHT OF EACH CELL 24 KG & DIMENSION OF EACH CELL 176 MM X 195MM X 405 MM	SET	2	0	2			DO
102.00	24 V DC 260 AMPS CHARGER COMPRISING INPUT ISOLATION TRANSFORMER & RECTIFIER - 2 PANELS EACH PANEL APPROX 750 KGS AND DIMENSION 1000 MM X 950 MM X 2415 MM PLUS DCDB I AND II EACH PANEL WEIGHT APPROX 200 KGS AND DIMENSION 1000 MM X 950 MM X 2415 MM POWER SYSTEM ALONGWITH DCDB AND BATTERY FOR 24 V DC 260 AMPS CHARGER COMPRISING <b>2 X 20 CELLS OF 375 AH</b> , APPROXIMATE WEIGHT OF EACH CELL 33 KG & DIMENSION OF EACH CELL 261 MM X 195MM X 405 MM	SET	3	0	3			DO



SR.NO	ITEM DESCRIPTION	Unit	Quantity			Unit Rate Rs	Amount in Rs	EQUIPMENT SUPPLIER SCOPE
			Unit 5	Unit 6	Total			
103.00	24 V DC 310 AMPS CHARGER COMPRISING INPUT ISOLATION TRANSFORMER & RECTIFIER - 2 PANELS EACH PANEL APPROX 750 KGS AND DIMENSION 750 MM X 950 MM X 2415 MM PLUS DCDB I AND II EACH PANEL WEIGHT APPROX 200 KGS AND DIMENSION 1000 MM X 950 MM X 2415 MM POWER SYSTEM ALONGWITH DCDB AND BATTERY FOR 24 V DC 310 AMPS CHARGER COMPRISING <b>2 X 20 CELLS OF 450 AH</b> , APPROXIMATE WEIGHT OF EACH CELL 36 KG & DIMENSION OF EACH CELL 261 MM X 195MM X 405 MM	SET	1	0	1			DO
104.00	24 V DC 480 AMPS CHARGER COMPRISING INPUT ISOLATION TRANSFORMER & RECTIFIER - 2 PANELS EACH PANEL APPROX 750 KGS AND DIMENSION 1000 MM X 950 MM X 2415 MM PLUS DCDB I AND II EACH PANEL WEIGHT APPROX 200 KGS AND DIMENSION 1000 MM X 950 MM X 2415 MM AND BATTERY FOR 24 V DC 480 AMPS CHARGER COMPRISING <b>2 X 20 CELLS OF 690 AH</b> , APPROXIMATE WEIGHT OF EACH CELL 57 KG & DIMENSION OF EACH CELL 430 MM X 195MM X 405 MM	SET	3	0	3			DO
105.00	24 V DC 720 AMPS CHARGER COMPRISING INPUT ISOLATION TRANSFORMER & RECTIFIER - 2 PANELS EACH PANEL APPROX 500 KGS AND DIMENSION 1000 MM X 950 MM X 2415 MM PLUS DCDB I AND II EACH PANEL WEIGHT APPROX 200 KGS AND DIMENSION 1000 MM X 950 MM X 2415 MM POWER SYSTEM ALONGWITH DCDB AND BATTERY FOR 24 V DC 720 AMPS COMPRISING <b>2 X 20 CELLS OF 1040 AH OR 2 X 40 CELLS OF 520 AH</b> , APPROXIMATE WEIGHT OF EACH CELL 45 KG & DIMENSION OF EACH CELL 345 MM X 195MM X 405 MM	SET	1	0	1			DO
	<b>CABLING:</b> Meggering,laying of cables on cable trays,through Conduits,Flexibles ,dressing ,tagging ,gland plate drilling,glanding, termination etc All consumables like lugs,cable tags ,Nylon ties, sleeves (SLEEVES OF REQUIRED COLOR & SIZE),Ferruling (with ferrule printing m/c) etc to be provided by bidder within the rates quoted below. ONLY GLANDS will be provided by BHEL as free issue.Shield wire to be sleeved and terminated at panel end.Tagging to be provided as per BHEL/NTPC specifications.Reconciliation of cables to be made by bidder.							
	<b>INSTRUMENTATION CABLES- BHEL SUPPLIED</b>							
	<b>F-TYPE:</b>							
106.00	4P,8C,4x2x0.5 sqmm	MTR	33000	33000	66,000			
107.00	8P,16C,8x2x0.5 sqmm	MTR	11000	11000	22,000			
108.00	12P,24C,12x2x0.5 sqmm	MTR	4000	4000	8,000			
	<b>G-TYPE:</b>							
109.00	4P,8C,4x2x0.5 sqmm	MTR	8000	8000	16,000			
110.00	8P,16C,8x2x0.5 sqmm	MTR	11000	11000	22,000			
111.00	12P,24C,12x2x0.5 sqmm	MTR	5000	5000	10,000			
	<b>COMPENSATING CABLES</b>							
112.00	KX TYPE ,2P,4 C	MTR	7000	7000	14,000			
113.00	SX TYPE,2P,4C	MTR	1000	1000	2,000			
	<b>POWER CABLES</b>							
114.00	1CX 120 SQ.MM ,1.1 KV GRADE UN ARMoured ALUMINIUM CONDUCTOR CABLE FOR EARTHING	MTR	3,000	3,000	6,000			

SR.NO	ITEM DESCRIPTION	Unit	Quantity			Unit Rate Rs	Amount in Rs	EQUIPMENT SUPPLIER SCOPE
			Unit 5	Unit 6	Total			
115.00	1CX35 SQ.MM 1.1 KV GRADE UN ARMoured ALUMINIUM CONDUCTOR CABLE FOR EARTHING	MTR	7,000	7,000	14,000			
116.00	4CX1.5 SQ.MM 1.1 KV GRADE UNARMoured COPPER POWER CABLE	MTR	4,000	4,000	8,000			
116 .01	<b>UTP CABLES</b>	MTR	35,000	35,000	70,000			
	<b>NTPC SUPPLIED CABLES</b>							
117.00	2 PAIR X 0.5 SQ.MM A TYPE THERMOCOUPLE EXTENSION CABLE ( K - TYPE)	MTR	3500	3500	7000			
118.00	2 PAIR X 0.5 SQ.MM B TYPE THERMOCOUPLE EXTENSION CABLE (S - TYPE)	MTR	500	500	1000			
119.00	2 PAIR X 0.5 SQ.MM C TYPE THERMOCOUPLE EXTENSION CABLE (K - TYPE)	MTR	5000	5000	10000			
	<b>F TYPE CABLES</b>							
120.00	4 PAIR 0.5 SQ.MM CABLE	MTR	75,000	75,000	150000			
121.00	8 PAIR 0.5 SQ.MM CABLE	MTR	25,000	25,000	50000			
122.00	12 PAIR 0.5 SQ.MM CABLE	MTR	10,000	10,000	20000			
123.00	16 PAIR 0.5 SQ.MM CABLE	MTR	5,000	5,000	10000			
124.00	24 PAIR 0.5 SQ.MM CABLE	MTR	1,500	1,500	3000			
	<b>G TYPE CABLES</b>							
125.00	4 PAIR 0.5 SQ.MM CABLE	MTR	82,500	82,500	165000			
126.00	8 PAIR 0.5 SQ.MM CABLE	MTR	30,000	30,000	60000			
127.00	12 PAIR 0.5 SQ.MM CABLE	MTR	7,500	7,500	15000			
128.00	16 PAIR 0.5 SQ.MM CABLE	MTR	5,000	5,000	10000			
129.00	24 PAIR 0.5 SQ.MM CABLE	MTR	7,500	7,500	15000			
130.00	48 PAIR 0.5 SQ.MM CABLE	MTR	5,000	5,000	10000			
	<b>CONDUITS: Installation in trenches,cable trays,along the walls ,dressing using saddles,Ties,tag plates etc .Fittings like bends,inspection bends etc supplied by BHEL.All consumables like saddles ,mounting hardware ,jumpers etc for conduiting / flexibles be arranged by bidder within quoted rates.</b>							
	<b>CONDUITS &amp; CABLE SUB TRAYS</b>							
131.00	RIGID CONDUITS ONE INCH NB SIZE	MTR	8,000	8,000	16000			
132.00	RIGID CONDUIT TWO INCH NB SIZE	MTR	2,000	2,000	4000			
133.00	FLEXIBLE CONDUIT 3/4 INCH SIZE	MTR	7,000	7,000	14000			
134.00	FLEXIBLE CONDUIT ONE INCH SIZE	MTR	2,000	2,000	4000			
135.00	CABLE SUB TRAY 50 MM WIDTH WITH OUT TRAY COVER	MTR	2,000	2,000	4000			
136.00	CABLE SUB TRAY 100 MM WIDTH WITH OUT TRAY COVER	MTR	4,000	4,000	8000			
137.00	CABLE SUB TRAY 150 MM WIDTH WITH OUT TRAY COVER	MTR	1,000	1,000	2000			
	<b>CABLE TRAY COVER INSTALLATION FOR</b>							
138.00	CABLE TRAY COVER 50 MM TRAY	MTR	400	400	800			
139.00	CABLE TRAY COVER 100 MM TRAY	MTR	800	800	1600			

SR.NO	ITEM DESCRIPTION	Unit	Quantity			Unit Rate Rs	Amount in Rs	EQUIPMENT SUPPLIER SCOPE
			Unit 5	Unit 6	Total			
140.00	CABLE TRAY COVER 150 MM TRAY	MTR	200	200	400			
141.00	Excavation in normal soil ,brick laying ,sand filling ,fixing cable marker every 10M AND bends OR as directed by engineer including supply of materials.Includes cost of laying of cable . Cable to be buried 750mm deep	MTR	6,000	2,000	8000			
142.00	_____do_____ but road crossing including making up the road including cost of laying of cables. Cable to be buried 750 mm deep	MTR	100	100	200			
	<b>MASTER CLOCK SYSTEM installlation at CER BUILDING, providing commissioining assistance TO VENDOR FOR panel and slave clocks.</b>							SUPERVISION of ERECTION & COMMISSIONING in VENDORS SCOPE.
143.00	MASTER CLOCK SYSTEM COMPRISING PANEL 1 NO. OF APPROXIMATE DIMENSION 900(w)X600(D)X2415 (H) MM ALONG WITH ANTENNAE CABLE(aPPROXIMATE 100 m) ,ANTENNAE AND ACCESSORIES	SET	1	1	2			DO
144.00	RG 58 COAXIAL CABLE FOR IRIG B & PULSE	MTR	1,500	1,500	3,000			
145.00	POWER SUPPLY CABLE 3C X 1.5 SQ. MM	MTR	2,500	2,500	5,000			
146.00	TCP /IP CAT 5 CABLE UTP CABLE	MTR	500	500	1,000			
147.00	BCD OUTPUT CABLE	MTR	500	500	1,000			
148.00	SLAVE CLOCKS INSTALLATION AT VARIOUS PLACES IN THE POWER PLANT.	NO.S	16	16	32			SUPERVISION of ERECTION & COMMISSIONING in VENDORS SCOPE.
149.00	HART MANAGEMENT SYSTEM COMPRISING PANEL APPROXIMATE DIMENSION 1200(W)X800 (D) X 2415(H) MM	NO.S	2	2	4			SUPERVISION of ERECTION & COMMISSIONING in VENDORS SCOPE.
150.00	HART SYSTEM PC COMPRISING CPU,MONITOR MOUSE, KEY BOARD INCLUDING INTERCONNECTION BETWEEN PC AND HMS PANEL	NO.	1	1	2			DO
151.00	HART SYSTEM PRINTER A4 SIZE INCLUDING INTERCONNECTION BETWEEN PC &PRINTER	NO.	1	1	2			DO
152.00	E/P Converter	No	12	12	24			
153.00	Air Filter Regulator	No	12	12	24			
154.00	<b>Temperature Elements :Healthiness Checking , installation and signal conditioning &amp; Commissioining.All thermowells to be seal welded</b>							
155.00	R-TYPE Thermocouple with out thermo well	No	6	6	12			
156.00	K-TYPE Thermocouple with Tungsten Carbide	No	20	20	40			
157.00	K-TYPE Thermocouple ( Flexible )	No	9	9	18			
158.00	K-TYPE Thermocouple	No	158	158	316			
159.00	RTD	No	89	89	178			

SR.NO	ITEM DESCRIPTION	Unit	Quantity			Unit Rate Rs	Amount in Rs	EQUIPMENT SUPPLIER SCOPE
			Unit 5	Unit 6	Total			
160.00	THERMOWELL FOR ABOVE INSTALLATION INCLUDING SEAL WELDING ,CLEANING OF THREADS ETC WHEREVER REQUIRED	NO.	282	282	564			
161.00	Impact Head Type Element (ANU BAR)	Set	2	2	4			

SR.NO	ITEM DESCRIPTION	Unit	Quantity			Unit Rate Rs	Amount in Rs	EQUIPMENT SUPPLIER SCOPE
			Unit 5	Unit 6	Total			
	<b>Flue Gas Analyser Systems :</b>							
162.00	Flue Gas Analyser SAMPLING TYPE FOR MEASURING SOX/NOX COMPONENTS - CONSISTS OF TWO PROBES ,HEAT TRACE LINE ,DRIER,TUBING SAMPLING PANEL (1200MM X 800 MM X 1900 MM ALONG WITH ALL INTER CONNECTIONS ETC INSTALLATION AT CHIMNEY 80M EL.	Set	1	1	2			SUPERVISION OF ERECTION & TOTAL COMMISSIONING IN EQPT.VENDOR'S SCOPE.
163.00	Oxygen Analyser Low temperature application ALONG WITH ASSOCIATED TUBING,CABLING CALIBRATION CYLINDER INSTALLATION.	No	4	4	8			SUPERVISION OF ERECTION & TOTAL COMMISSIONING IN VENDORS SCOPE
164.00	Oxygen Analyser High Temperature application ALONG WITH ASSOCIATED TUBING,CABLING CALIBRATION CYLINDER INSTALLATION	No	2	2	4			SUPERVISION OF ERECTION & TOTAL COMMISSIONING IN EQPT.VENDOR'S SCOPE.
165.00	Dust / Opacity Analyser INSTALLATION AT CHIMNEY 80 M EL.	No	1	1	2			SUPERVISION OF ERECTION & TOTAL COMMISSIONING IN EQPT.VENDOR'S SCOPE.
166.00	CO Analyser INSTALLATION LOCATION ID FAN O/L	No	2	2	4			SUPERVISION OF ERECTION & TOTAL COMMISSIONING IN EQPT.VENDOR'S SCOPE.
	<b>Vibration Monitoring System :</b>							
167.00	Vibration Monitoring System PANELS APPROXIMATE SIZE 800 MM X 800MM X 2400 ,,	NO.	3	3	6			SUPERVISION OF ERECTION & TOTAL COMMISSIONING IN EQPT.VENDOR'S SCOPE.
168.00	Vibration SENSORS FOR BEARING VIBRATION OF CW/ACW/ECW/ID/FD/PA ETC.	NO.	68	68	136			INSTALLATION OF SENSOR ON TO MACHINE BEARINGS & TOTAL COMMISSIONING IN EQPT.VENDOR'S SCOPE.
	<b>Coal Bunker level monitoring System</b>							

SR.NO	ITEM DESCRIPTION	Unit	Quantity			Unit Rate Rs	Amount in Rs	EQUIPMENT SUPPLIER SCOPE
			Unit 5	Unit 6	Total			
169.00	Coal Bunker level monitoring System - CONSISTING OF SENSORS ,ELECTRONIC UNIT (1NO. TO BE LOCATED IN MAIN CONTROL ROOM)JUNCTION BOXES ,BARGRAPH INDICATOR 9 NO.S & ENCLOSURE FOR BARGRAPH INDICATOR.CABLING FROM SENSOR JB TO CONTROL ROOM,CONTROL ROOM TO BARGRAPH INDICATOR EXCLUDED	SET	1	1	2			SUPERVISION OF ERECTION OF ALL ITEMS EXCEPT SENSOR MOUNTING ,SENSOR ERECTION ON BUNKER LEGS / BEAMS & TOTAL COMMISSIOING OF THE SYSTEM IN EQPT SUPPLIER SCOPE.
	<b>Steam and Water Analysis System : GENERALLY work includes installation,Mounting of Loosely supplied analysers in the panels,wiring and tubing for connection within the panel.Arranging all loose supply items including chemicals .accessories etc.and providing commissioining assistance to vendors engineers.Piping work ,drain line work outside of panels are covered in piping work.</b>							SUPERVISION OF ERECTION & COMMISSIOING OF THE SYSTEM
170.00	Primary Rack(Sampling Rack)	NO.	2	2	4			DO
171.00	Wet Panel APPROXIMATE DIMENSION 3300(W) X 2400(H) X 2000(D) MM WEIGHT 1000 KGS	NO.	1	1	2			DO
172.00	DRY PANEL 3500(W)X 2400 (h) X 1000(d) MM WEIGHT 500 KGS	NO.	1	1	2			DO
173.00	CHILLER 3040 (W) X 1340 (D) X 1800 (H)	NO.	1	1	2			DO
174.00	Conductivity Analyser	No	18	18	36			DO
175.00	Dissolved Oxygen Analyser	No	3	3	6			DO
176.00	Hydrazine Analyser	No	1	1	2			DO
177.00	pH Analyser	No	8	8	16			DO
178.00	Silica Analyser	No	1	1	2			DO
179.00	Sodium Analyser	No	1	1	2			DO
180.00	Phosphate Analyser	No	1	1	2			DO
181.00	Chloride Analyser	No	1	1	2			DO
	<b>Local Instrument Enclosures / Racks ( LIE / LIR ) :Installation at various locations /elevations in Boiler/TG/offsites as per instructions of BHEL Engineer. DIMENSIONS WDXH</b>							
182.00	Local Instrument Enclosure - Type A 1250mmx800mmx2300mm weight 900 kgs	No.	8	8	16			
183.00	Local Instrument Enclosure - Type B 930MM X 800MM X 2300MM WEIGHT 660 KGS	No.	22	22	44			
184.00	Local Instrument Enclosure - Type C 630MM X 600MM X 2100MM WEIGHT 370 KGS	No.	5	5	10			
185.00	Local Instrument Rack - Type A 1650MMX800MMX 2150MM 400 KGS	No.	9	9	18			
186.00	Local Instrument Rack - Type B 1330MMX800MMX2150MM 300 KGS	No.	11	11	22			
187.00	Local Instrument Rack - Type C 1010MMX 800MM 2150 MM 200 KGS	No.	10	10	20			

SR.NO	ITEM DESCRIPTION	Unit	Quantity			Unit Rate Rs	Amount in Rs	EQUIPMENT SUPPLIER SCOPE
			Unit 5	Unit 6	Total			
	IMPULSE PIPES : Identification,marking,stacking,cleaning,shifting to location ,installation,socket welding,Hydraulic testing,leak checing,NDT etc primer & final painting (including supply of paints as per colour code of customer) All consumables like welding electrodes,testing materials ,tags etc needed for the work to be supplied by the bidder within the quoted price.Installation of all impulse line fittings including condensate pots are considered as part of impulse line work. Welding to be carried out by qualified welders accepted by BHEL/Customer and strictly as per approved welding procedure of BHEL/Customer.FOR P91 PIPES HEAT TREATMENT NEEDED.							
188.00	ASTM A 335 P91 1/2" NB XXS	MTR	380	380	760			
189.00	ASTM A 335 P22 1/2" NB XXS	MTR	520	520	1,040			
190.00	ASTM A 335 P22 3/4" NB Sch 80	MTR	300	300	600			
191.00	ASTM A 213 TP 316 H 3/4" NB Sch 80	MTR	1100	1100	2,200			
192.00	ASTM A 213 TP 316 H 3/4" NB Sch 160	MTR	600	600	1,200			
193.00	ASTM A 106 Gr C 1/2" NB SCH 160	MTR	1225	1225	2,450			
194.00	ASTM A 106 Gr C 1/2" NB SCH 80	MTR	4550	4550	9,100			
195.00	ASTM A 106 Gr C 3/4" NB SCH 80	MTR	2850	2850	5,700			
196.00	ASTM A 106 Gr C 1/2" NB SCH 40	MTR	450	450	900			
	G.I. PIPE- AIRLINE WORK OF SIZE :Work involves Identification,marking,cleaning,shifting to location ,installation,Leak testing (if needed) etc identification band painting (including supply of paints) .All consumables needed for the work to be supplied by bidder within the quoted price.Installation of all GI pipe fittings including are considered as part of piping work. Fittings supplied by BHEL.							
197.00	1/2 (HALF ) INCH NB	MTR	3300	3300	6,600			
198.00	1 INCH NB	MTR	1300	1300	2,600			
199.00	2 INCH NB	MTR	500	500	1,000			
200.00	COPPER TUBE 1/4 INCH OR 6 mm	MTR	100	100	200			
201.00	SS TUBE 1/2 (HALF) INCH	MTR	100	100	200			
202.00	Fabrication,Installation ,Primer Painting,and finish painting (paint to be arranged by bidder within the quoted price ) of structural steel (Angles,Channels ,Flats and plates)	TON	25	25	50			
	JUNCTION BOXES							
203.00	12 WAY	No.	23	23	46			
204.00	24 WAY	No	36	36	72			
205.00	36 WAY	No	14	14	28			
206.00	48 WAY	No	10	10	20			
207.00	64 WAY	No	78	78	156			
208.00	128 WAY	No	10	10	20			

SR.NO	ITEM DESCRIPTION	Unit	Quantity			Unit Rate Rs	Amount in Rs	EQUIPMENT SUPPLIER SCOPE
			Unit 5	Unit 6	Total			
	<b>CJCJBs</b>				0			
209.00	K TYPE - 12 WAY / 24 WAY	No	6	6	12			
210.00	R TYPE - 12 WAY	No	2	2	4			
211.00	POWER DISTRIBUTION BOARDS FOR CJCJB	No	3	3	6			
212.00	LABORATORY ITEMS AS PER ENCLOSED ANNEXTURE A .INDICATE ITEM WISE BREAK UP.	LOT	1	0	1			
	<b>MANPOWER SUPPLY EXCULSIVELY FOR USE OF BHEL EDN SITE OFFICE FOR ASSISTING BHEL SITE OFFICE FOR STORES ,SITE OFFICE AND FIELD HOSTEL WORK. DEPUTATION NEEDED FOR ENTIRE CONTRACT PERIOD.</b>							
213.00	STORES ASSISTANT	MAN MONTH	18	0	18			
214.00	HELPER	MAN MONTH	36	0	36			
215.00	OFFICE ASSISTANT	MAN MONTH	18	0	18			
	<b>MANPOWER SUPPLY EXCULSIVELY FOR USE OF BHEL EDN SITE OFFICE FOR ASSISTING DURING TRIAL OPERATION , MAINTENANCE &amp; TROUBLE SHOOTING etc TILL HANDING OVER OF THE SYSTEM, PG TEST OR AS PER BHEL REQUIREMENT. PLEASE REFER CLAUSE 52 OF SCC.</b>							
216.00	ENGINEER	MAN MONTH	UNIT RATE					
217.00	SKILLED TECHNICIAN	MAN MONTH	UNIT RATE					
218.00	Few of the materials are already unloaded at BHEL PSNR stores.The rate per MT for shifting and restacking at EDN stores of such material may be indicated.	MT	UNIT RATE					
219.00	Bidder to indicate the weightage factor in % of quoted rate for unloading work.This will be considered for recovery from successful bidders bills for the items already unloaded by BHEL.It may be noted that few items like Transmitters ,Part qty odf cables & part quantiyy of impulse pipes are already received at site.	%						
	<b>TOTAL</b>							



SR.NO	ITEM DESCRIPTION	Unit	Quantity			Unit Rate Rs	Amount in Rs	EQUIPMENT SUPPLIER SCOPE
			Unit 5	Unit 6	Total			
ANNEXURE A								
LIST OF CALIBRATION LABORTATORY ITEMS GIVEN BELOW. WORK INVOLVED IS ,UNLOADING ,RECEIPT ,SHIFTING TO C&I LAB OF CUSTOMER AND HANDING OVER. FOR ITEMS MARKED # ARE ONLY TO BE HANDED OVER. ITEMS MARKED * ARE TO BE INSTALLED AND COMMISSIONED UNDER VENDOR SUPERVISION.								
LABORATORY ITEMS- ( ELECTRICAL COMMON)								
Sr.No.	Equipment Details							
01	ELECTRONIC TEST BENCH	No	1		1			*
02	SOLDERING/DESOLDERSING STATION +ACCESSORIES	No	2		2			#
03	PORTABLE DIGITAL TACHOMETER	No	2		2			#
04	DIGITAL MULTIMETER				0			
05	DMM 4 1/2 DIGITS	Nos	2		2			#
06	DMM 5 1/2 DIGITS	Nos	2		2			#
07	DMM 6 1/2 DIGITS	Nos	2		2			#
08	Portable DMM 4 1/2 DIGITS	Nos	6		6			#
09	Portable DMM 3 1/2 DIGITS	Nos	10		10			#
10	PORTABLE CURRENT/mV CALIBRATOR	No	10		10			#
11	RESISTANCE THERMOMETER BRIDGE	No	2		2			#
12	DECADE RESISITANCE BOX	No	2		2			#
13	DECADE CAPACITANCE BOX	No	2		2			#
14	DECADE INDUCTANCE BOX	No	2		2			#
15	RHEOSTAT / POTENTIOMETERS	No	10		10			#
16	TEST RESISTANCE TEMPERATURE DETECTOR	NO	2		2			#
17	TEST THERMOCOUPLE	NO	2		2			#
18	VARIAC	No	2		2			#
19	PORTABLE THERMOCOUPLE/RTD CALIBRATOR/SIMULATOR	No	1		1			*
20	PORTABLE MULTI-FUNCTION COUNTER	No	1		1			*
21	DIGITAL STORAGE OSCILLOSCOPE	No	2		2			*
22	PORTABLE VIBRATION METER	No	2		2			#
23	PORTABLE VIBRATION ANALYSER	No	1		1			#
24	RCL METER	No	1		1			*
25	pH SIMULATOR	No	1		1			*

SR.NO	ITEM DESCRIPTION	Unit	Quantity			Unit Rate Rs	Amount in Rs	EQUIPMENT SUPPLIER SCOPE
			Unit 5	Unit 6	Total			
26	LOGIC PROBE	No	4		4			#
27	FUNCTION GENERATOR	No	2		2			*
28	POWER PACK	No	2		2			*
29	CLIP-ON AC POWER METER	No	1		1			#
30	PORTABLE HIGH SPEED TREND RECORDER	No	1		1			*
31	LAN COAXIAL CABLE METER/TESTER	No	1		1			#
32	DIGITAL INSULATION TESTER	No	2		2			#
33	WALKIE-TALKIE SYSEM	No	15		15			#
34	DRAWING SCANNER (A3 SIZE)	No	1		1			*
35	FIBRE OPTIC TESTING TOOL SET	No	1		1			*
36	GROUND RESISTANCE TESTER	No	1		1			*
37	LAB PCs	No	2		2			#
<b>LAB ITEMS- MECHANICAL-COMMON</b>								
01	Dead Weight Tester	No	1		1			*
02	Vacuum Tester	Set	1		1			*
03	Vacuum Pump	No	1		1			*
04	Test Manometer	No	2		2			*
05	U tube Manometer	No	2		2			*
06	Sub Standard Quality Pressure Gauges	Set	2		2			#
07	Portable Electro-Pneumatic Calibrator	No	2		2			*
08	Fluidized Temperature Bath	No	1		1			*
09	Thermocouple Test Furnace	No	1		1			*
10	Barometer	No	1		1			#
11	Mercury Thermometer	Set	2		2			*
12	Digital Thermometer/ Hygrometer	No	2		2			*
13	Portable Infrared Thermometer	No	1		1			*
14	Portable Flue Gas Analyser	No	2		2			*
15	Portable Ultrasonic Meter	No	1		1			*
16	Pneumatic Test Bench	No	1		1			*
17	Air Set	No	4		4			*
18	Radial Drilling Machine	No	1		1			*
19	Standard Tool Box	Set	3		3			#
20	Bench Magnifier	No	1		1			#
21	Industrial Vacuum Cleaner	No	1		1			*
22	Stop Watches	No	3		3			*