

## Supporting documents for criteria 2.3.1 (descriptive)

Well-equipped laboratories: -



**Electrical Machines Lab (Department of Electrical Engineering)**



**Engineering Geology lab (Department of Civil Engineering)**



**Digital Electronics Lab (Department of Electronics & Telecommunication Engineering)**



**Television & Video Engineering Lab (Department of Electronics & Telecommunication Engineering)**



**Drives & Control Lab (Department of Electrical Engineering)**



**Project Lab (Department of Electrical Engineering)**



**Control System & DSP lab (Department of Instrumentation Engineering)**



**Transducers & Measurement lab (Department of Instrumentation Engineering)**



**Autocad lab (department of Civil Engineering)**



**Theory of Machines lab (Department of Mechanical Engineering)**




**Mechanical Vibrations lab (department of Mechanical Engineering)**

## Maintained details of Laboratories

All the details of laboratories are properly maintained by each department. Herewith as an example we are providing details (list of equipment, components, costing etc.) of Electrical machines lab

### Electrical Machines lab details

 <b>VPM's</b> <b>Maharshi Parshuram College Of Engineering , Velneswar</b> <b>Department of Electrical Engineering</b> <b>Electrical Machine Lab</b>									
Sr.No.	Description	Specification	Qty.	Unit Rate	Total Amount	Bill No.	Bill Date	Name of Supplier	Remarks
1	Control Panel to perform Load test on DC shunt motor	—	1	19,665	19,665	13-14/R-007	30/05/2013	BENN ELECTRICALS THANE	
2	Control Panel to perform Field's test	—	1	22,570	22,570				
3	Control Panel to perform Speed control & Swinburn test on DC Shunt motor	—	1	22,440	22,440				
4	Control Panel to perform Retardation test on DC Shunt motor	—	1	23,365	23,365				
5	Control Panel for study of DC motor starters	—	1	26,180	26,180				
6	Control Panel for OC-SC test on Single Phase Transformer.	—	1	27,740	27,740				
7	Control Panel for Sumpner's test & Parallel operation of Single Phase Transformer.	—	1	28,305	28,305				
8	60A-DC Thyristor Power supply.	—	1	103,785	103,785				
9	16Ohm/6A Field Diverter ( Rheostat type )	—	2	1,695	3,390				
10	Single Phase /10A Resistive load in 10 steps	1 Phase/10A	1	9,990	9,990				
10	Single Phase /10A Resistive load in 10 steps	1 Phase/10A	1	9,990	9,990	13-14/R-008	30/05/2013	BENN ELECTRICALS THANE	
11	Resistive load in 10 Steps	1 Phase/20A	1	13,820	13,820				
12	1 Phase Transformer -	1KVA/230-115V	1	7,585	7,585				
13	1 Phase Transformer -	2KVA/230-230V	2	9,927	19,854				
14	1 Phase Transformer -	500VA Auxillary	1	6,560	6,560				
15	1 Phase Auto Transformer -	10 Ampere	2	4,745	9,490				
16	UPF Single Phase Portable Wattmeter	300-600/10-20A	2	3,625	7,250				
17	Digital Contact type Tachometer	—	2	3,790	7,580				
18	Digital NonContact type Tachometer	—	1	4,255	4,255				
19	DC Shunt motor with BDA	5HP/220V/1500 RPM	1	35,020	35,020				
20	Series DC Identical Machine Set	2KW/220V/1500 RPM	1 set	47,175	47,175	13-14/030	30/05/2013	BENN ELECTRICALS THANE	
21	DC Shunt motor	2 HP/220V/1500 RPM	1	17,480	17,480				
22	DC Shunt Motor with flywheel	3 HP/220V/1500 RPM	1	26,365	26,365				
23	DC Integrated Motor	0.5 HP/180V/1500 RPM	1	10,635	10,635				
24	DC Shunt Motor working cut section	0.5HP/180V/1500 RPM	1	9,795	9,795				
25	Digital Megger	1000V,2000M Ohm	1	Donated by VPM Poly	—				
26	Screw driver	Flat bit	1	100	100	—	08/10/2014	GAYATRI TRADERS	
27	Screw driver	Star bit	1	80	80				
28	Screw driver set	—	1	189	189				
29	Combination plier	—	1	227	227				
30	Nose plier	—	1	178	178	08/10/2014	08/10/2014	ELECTRICAL	
31	Tester	—	2	49	98				
32	Squirrel Cage Induction Motor with mechanical loading arrangement	3HP/415V/1440RPM/TEFC/3 Phase	1	29500	29500	ARK/T1/06	14/08/2014	ARK Instruments	
33	Control Panel for Squirrel cage induction motor	—	1	22000	22000				
34	DOL Starter	—	1	2600	2600				
35	Star- Delta Starter ,Manual	—	1	5500	5500				
36	Star- Delta Starter , Automatic	—	1	6500	6500				
37	Rotor Resistance Starter	—	1	4800	4800				
38	Auto-Transformer Starter	—	1	14500	14500				
39	Slipping Induction Motor	3HP/415V/1440RPM/3Phase	1	45000	45000				
40	Control Panel for Slipping Induction Motor	—	1	26000	26000	ARK/T1/07	14/08/2014	ARK Instruments	
41	Squirrel cage Induction Motor	1HP/230V/1440RPM/1Phase	1	20000	20000				
42	Control Panel for 1phase squirrel cage Induction Motor	—	1	19000	19000				

43	3Phase Transformer	1KVA/415V	1	13150	13150	14-15/020	13/08/2014	Benn Electricals
44	Control Panel for 1KVA 3Phase Transformer	—	1	18790	18790			
45	Wattmeter	1Phase/0.5-1A/150-300-600V LPF	2	5605	11210			
46	Wattmeter	1Phase/2.5-5A/75-150-300V UPF	2	3055	6110			
47	Phase sequence Indicator	—	1	1500	1500	14-15/R-68	23/03/15	Benn Electricals Pvt. Ltd.
48	Panel for Motor - Alternator set	—	3	27926	83778			
49	Panel for Synchronous motor	—	1	25502	25502			
50	Vaiable Inductive load	3 phase / 4.2 A	1	30368	30368			
51	Capacitive load	3 phase / 5 A	1	18038	18038			
52	Resistive load	3 phase / 10 A	1	22246	22246			
53	Resistive load	3 phase / 5 A	1	14985	14985			
54	Synchronizing panel	—	1	23587	23587			
55	Variac	3phase / 6 A	1	12617	12617			
56	UPF wattmeter	2.5/5 A - 150/300/600 V	2	3006	6012			
57	DC shunt motor - Alternator set	Motor - 5 HP/220V/1500 RPM Alternator - 3KVA / 3PH/415 V	3 set	63090	189270	198	23/03/2015	
58	Auto synchronous motor	5HP/3PH/415V /1500RPM	1	44474	44474			
59	Cut section working synchronous motor	0.5 HP/3PH/415V/1500RPM	1	17182	17182			

67	60	Transformer	1 phase/2KVA/440-220V with tapping	3	11439	34317	1717140	03/09/2018	Benn Electricals Pvt. Ltd.
68	61	Control Panel for Transformer	—	1	22283	22283			
69	62	Resistive Load Bank	415V/5A/6 steps	1	14787	14787			
70	63	Ammeter	2.5 -5A DC	1	1800	1800	SGP-021	13/03/2018	SGP Instruments
71	64	Ammeter	10-20 A DC	1	1800	1800			
72	65	Ammeter	2.5-5A AC	1	1800	1800			
73	66	Ammeter	10-20 AAC	1	1800	1800			
74	67	Voltmeter	150-300 V DC	1	1800	1800			
75	68	Voltmeter	300-600 V AC	1	1800	1800			
76	69	Power Factor Meter Portable	1 Phase 150/300/600V/5A/10A	1	2850	2850			
77	70	Wattmeter	3Phase/125/250/500V.5/10A	2	3300	6600			
78	71	Tong Tester	MECCO	1	3350	3350			
79	72	Megger	—	1	1800	1800			
80	73	Tachometer	Non Contact Type	2	2800	5600			
81	74	Frequency Meter	—	1	2200	2200			
82	75	Multimeters	6036 Model	5	1950	9750			
83	76	Anemometer	Digital	1	4500	4500			
84					<b>Total Amount</b>	<b>1364222</b>			
85					<b>Total Excise Duty @12%</b>	<b>17576</b>			
86					<b>Total Edu. Cess @ 2%</b>	<b>352</b>			
87					<b>Total H.Edu.Cess @1%</b>	<b>176</b>			
88					<b>Total M.VAT.@ 12.5%</b>	<b>158051</b>			
89					<b>Total Transportation Charges</b>	<b>9500</b>			
90					<b>Amount of duty</b>	<b>31366</b>			
91					<b>Total Discount @ 20%</b>	<b>39080</b>			
92					<b>Packing 5%</b>	<b>3569</b>			
93					<b>SGST 9%</b>	<b>11016</b>			
94					<b>CGST 9%</b>	<b>11016</b>			
95					<b>Grand Total</b>	<b>1567764</b>			



## Other documentations

Herewith attached other types of documentations (Like tax invoice, purchase order, costing details including GST, CGST, delivery challan etc. of Electrical machines lab & Power Electronics lab)

TAX INVOICE									
Subject to Mumbai Jurisdiction									
<b>BENN ELECTRICALS</b> B4, Vikas Udyog Nagar, Near Rly. Crossing, Bhayandar (E), Dist. Thane, Maharashtra - 401 105					ORIGINAL FOR RECEIPT <span style="font-size: 2em; font-weight: bold;">201803788</span> Phone : 022 - 28192419 Email : bennelectricals@gmail.com				
Invoice No.	1718140	PO No.	NPCOE/5/2018/21		PO Date	18/01/2018			
Date	09/03/2018	Transport	by Bus No. MH-48-AY-7755						
Challan No.	B-422	LR No.	Reverse Charge NO						
Time of Supply	10.30 am		Place of Supply Maharashtra						
Buyer (Billed to)					Consignee (Shipped to)				
Vidya Prasarak Mandal, Thane's Maharshi Parshuram College of Engineering, Hedvi Guhagar Road, At. Velneswar, Tal. Guhagar, Dist. Ratnagiri, PIN - 415 729					Vidya Prasarak Mandal, Thane's Maharshi Parshuram College of Engineering, Hedvi Guhagar Road, At. Velneswar, Tal. Guhagar, Dist. Ratnagiri, PIN - 415 729				
GSTIN					GSTIN				
Code	27	State	Maharashtra		Code	27	State	Maharashtra	
Sl. No.	Description of Goods	HSN Code	Qty. Nos.	Rate INR	Per	Amount INR			
1)	2KVA/440-220V/1 Phase Transformer with 50% & 86.6% tappings on both side.	8504	3	11,439.00	no.	34,317.00			
2)	Control Panel for above Transformer.	8537	1	22,283.00	no.	22,283.00			
3)	3 Phase/415V/5A Resistive Load - 6 steps.	8537	1	14,287.00	no.	14,287.00			
			Total	5		71,387.00			
Total No. of Packages - 5 Nos. loose			Less	% Discount		0.00			
Way Bill No.			Add	5 % Packing		3,969.00			
GSTIN : 27AABPL6199E1ZJ			Add	% Insurance		0.00			
STATE Maharashtra CODE : 27			Add	Freight & forw.		0.00			
Division Commissionerate					<b>Taxable Value</b>		<b>74,956.00</b>		
Total Invoice value in words : Rupees Eighty eight thousand four hundred forty eight only.					9 % SGST		6,746.00		
					9 % CGST		6,746.00		
					% IGST		0.00		
					<b>Total Amount</b>		<b>88,448.00</b>		
					<b>for Benn Electricals</b>				
I/We here by confirmed that all particulars given are true and correct Note Payment within _____ days									

Second copy.

201803791

**S.G.P. INSTRUMENTS.**

TAX INVOICE

SANGLIWADI, SANGLI. 09960766740, 09712865287. E-mail- harshalphulle@gmail.com  
 Designing & Manufacturing, Power, Measurement, Control, Industrial, Instrumentation  
 Educational, Instruments.

To- MAHARSHI PARSHURAM COLLEGE  
 OF ENGG.  
 VELNESHWAR - GUDHAGHAR.

Bill No-SGP-021, Date- 13.03.2018

P.O. No-MPCOE/5/18/ZZ. Date- 10.01.18

PARTY GSTIN No.-

Sr. No.	Name of Materials	Qty	Cost	Amount
1.	Ammeter (0-2.5 - 5 A DC)	1No.	1,800.00	1,800.00
2.	Ammeter (0-10-20 A DC)	1No.	1,800.00	1,800.00
3.	Ammeter (0-2.5 -5 A AC)	1No.	1,800.00	1,800.00
4.	Ammeter (0-10-20 A AC)	1No.	1,800.00	1,800.00
5.	Voltmeter (0-150-300VDC)	1No.	1,800.00	1,800.00
6.	Voltmeter (0-300-600 AC)	1No.	1,800.00	1,800.00
7.	Power factor Meter Portable, Single phase 150/300/600V,5/10A	1No.	2,850.00	2,850.00
8.	Wattmeter 3 Phase,125/250/500V,5/10A	2No.	3,300.00	6,600.00
9.	Test tester MECCO.	1No.	3,350.00	3,350.00
10.	Megger	1No.	1,800.00	1,800.00
11.	Tachometer non Contact Type	2No.	2,800.00	5,600.00
12.	Frequency Meter	1No.	2,200.00	2,200.00
13.	Multimeter MFCCO 103 MODEL	5No.	1,950.00	9,750.00
14.	Anemometer. DIGITAL.	1No.	4,500.00	4,500.00
<b>TOTAL</b>				<b>47,450.00</b>
CGST @ 09%				<b>+4,270.00</b>
SGST @ 09%				<b>+4,270.00</b>
<b>TOTAL AMOUNT</b>				<b>55,990.00</b>


consum / 02

Rs. In Words- FIFTY FIVE THOUSAND NINE HUNDRED NINETY ONLY.

I/we hereby certify that my/our registration certificate under the GST ACT 2017 is in force on the date on which the sales of goods specified in this tax invoice is made by me/us.

For: SGP INSTRUMENT'S

  
 (Authorized Signatures)

Vidya Pratishtha Mandali, Thane's Maharshi Parshuram College of Engineering, Hedol Gahagar Road, At: Velvetheer, Taluka: Gahagar, Dist: Raigarhi, Maharashtra 415729		Tel No. 02299-18520 / 26 E-mail: info@vpscgroup.org URL: www.vpscgroup.org			
<b>PURCHASE ORDER</b>					
Vendor Name & Address: M/A: Advance Electronics Industries 1/115, Nihar Seth Industrial Estate, Panvel Compound, L.S.S. Marg, Bhamburda (West), Mumbai - 402 078		P. O. No.: MPCOE/5/2014/15 Date: 27/05/2014 Vendor Ref.: Date:			
Kindly arrange to send the below material as per our Terms & Conditions to Electrical Dept. :-					
Sr.No.	Material Description	Qty.	Unit	Rate	Total Amt.
1	Characteristics of SCR - Model No. 8512	1	No.	3500.00	3500.00
2	V/I Characteristics of IGBT	1	SET	7500.00	7500.00
1	SCR & AC Phase Control with R. RC, UJT, 555 TRIGGER Circuit (Model - 8505)	1	SET	11000.00	11000.00
4	Forced commutation Methods of SCR ( Model No. 3025)	1	set	9000.00	9000.00
5	Single Phase Full Wave Full controlled Rectifier ( Model No. 8514 )	1	SET	9000.00	9000.00
6	3 Phase Full Controlled Bridge Rectifier ( Model No. 8520 )	1	SET	28000.00	28000.00
7	SCR Series Inverter ( Model No. 8523 )	1	SET	16500.00	16500.00
8	SCR Parallel Inverter ( Model No. 8524 )	1	SET	16500.00	16500.00
9	Chopper Using MOSFET ( Model No.8525 )	1	SET	14000.00	14000.00
10	TRIAC & AC Phase Controller with R, DIAC, UJT TRIGGER Circuit ( M- 8506 )	1	SET	11000.00	11000.00
11	Single Phase AC Voltage Controller ( Model No.8522)	1	SET	28500.00	28500.00
<b>Total Amount</b>					<b>154500.00</b>
Discount 35 %					54075.00
Price after Discount					<b>100425.00</b>
VAT 12.5 % ( R/OIT)					12553.13
					<b>112978</b>
(Rupees One Lakh Twelve Thousand Nine Hundred Seventy Eight Only.)		Vidya Pratishtha Mandali's Maharshi Parshuram College of Engineering			
<b>Terms &amp; Conditions :-</b> 1) Material required within 1 month after Purchase Order Place 2) Material to be delivered at our Velvetheer College Address. 3) Including Transportation Charges. 4) Warranty 1 Year against any Mfg. Defects. 5) Material should deliver with proper Invoice & Warranty Card. 6) If Material found damaged, will be rejected. 7) Payment Mode : Cheque/NFT. 8) 1% will be paid against Delivery & Rest 50 % will be paid within 3 months 9) Lab Manual & Design Procedure is necessary.		 Authorized Signatory Dr. Shilpa Kamat (V.C. Vinodpol)			

*(Handwritten signatures and initials)*

### Purchase order of Power Electronics Lab



# ADVANCE ELECTRONIC INDUSTRIES

U135, MAHAR & SETH INDUSTRIAL ESTATE, PAMPALAI COMPOUND, L.B.S. MARG, BHANDUP (WEST),  
 MUMBAI - 400 078, MAHARASHTRA, INDIA. Ph: 022- 2596 9769 / 2596 9770 Telefax : 91-22-2596 2147  
 E-mail : info@adtrontechnologies.com / sales@adtrontechnologies.com & Website : www.adtrontechnologies.com

SUBJECT RO MUMBAI JURISDICTION

*(Cons 120/134)*

To, THE PRINCIPAL V P P'S MAHARSHI PARSHURAM COLLEGE OF ENGINEERING, HELDVI GUHAGAR ROAD, AT. VELNESHWAR, TAL : GUHAGAR, RATNAGIRI - 415 729 MAHARASHTRA	TAX  INVOICE  No. : 46/14-15. Date : 29/07/2014.
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Thank for your Order No.

Sr. No.	Qty	Description	Price Per Unit	Amount (Rs.)
1	01 Nos	Characteristics of SCR <i>CDSE 04/113</i>	2275/-	2,275-00
2	01 Nos	Characteristics of IGBT <i>1-1/14</i>	4675/-	4,675-00
3	01 Nos	SCR & AC Phase Control <i>1-1/50</i>	7150/-	7,150-00
4	01 Nos	Triac & AC Phase Control <i>1-1/51</i>	7150/-	7,150-00
5	01 Nos	1 φ AC Voltage Controller Trainer <i>1-1/52</i>	16525/-	16,525-00
6	01 Nos	3 φ Full Controlled Bridge Rectifier <i>1-1/53</i>	18200/-	18,200-00
7	01 Nos	Forced Commutation of SCR <i>1-1/54</i>	5850/-	5,850-00
8	01 Nos	1 φ Full Wave Full Controlled Rectifier <i>1-1/55</i>	5850/-	5,850-00
9	01 Nos	1 φ SCR Series Inverter <i>1-1/56</i>	10725/-	10,725-00
10	01 Nos	1 φ SCR Parallel Inverter <i>1-1/57</i>	10725/-	10,725-00
11	01 Nos	Chopper Using MOSFET <i>1-1/58</i>	9100/-	9,100-00
				1,00,425-00
ADD : VAT @12.5%				12,553-00
<b>Total</b>				<b>1,12,978-00</b>

*Handwritten signatures and notes:*  
 Accepted  
 Recd  
 Mr. Sachin M. Chakrapani  
 (H/o Head.)

NETT AMOUNT : RUPEES ONE LAKH TWELVE THOUSAND NINE HUNDRED SEVENTY EIGHT ONLY  
 ADVANCE ELECTRONIC INDUSTRIES

I hereby certify that my tax registration certificate under the Maharashtra Value Added Tax Act, 2002 is in force on the date on which the sale of the goods specified in this Tax Invoice is made by me/ us and that the transaction of the sale covered by this Tax Invoice has been effected by me/ us and it shall be accounted for in the turnover of sales while filing of

Power Electronics tax invoice



VPM's

**Maharshi Parshuram College Of Engineering , Velneshwar**  
**Department of Electrical Engineering**  
**Power Electronics Lab**

Sr.No.	Description	Model No	Qty.	Unit Rate	Total Amount	Bill No.	Bill Date	Name of Supplier
1	Characteristics of SCR	6512	1	2275	2275	46/14-15	29/7/2014	Advance Electronics Industries
2	VI Characteristics of IGBT		1	4875	4875			
3	SCR & AC phase Control with R, RC,UJT, trigger Circuit	8505	1	7150	7150			
4	Forced commutation method of SCR	2025	1	5850	5850			
5	Single phase Full wave Full controlled Rectifier	8514	1	5850	5850			
6	3 Phase full Controlled Bridge Rectifier	8520	1	18200	18200			
7	1Φ SCR series Inverter	8523	1	10725	10725			
8	1 Φ SCR parallel inverter	8524	1	10725	10725			
9	Chopper Using MOSFET	8535	1	9100	9100			
10	TRIAC & AC Phase Controlled with R,DIAC, UJT, Trigger Circuit	8506	1	7150	7150			
11	Single Phase AC Voltage Controller	8552	1	18525	18525			
				<b>Total Amount</b>	<b>100425</b>			
				<b>VAT 12.5%</b>	<b>12553</b>			
				<b>Grand Amount</b>	<b>112978</b>			

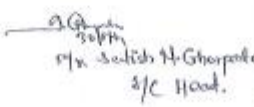

**Power Electronics Costing details.**



# ADVANCE ELECTRONIC INDUSTRIES

1135, MAHAR & SETH INDUSTRIAL ESTATE, PAMMALAL COMPOUND, L.B.S. MARG, BHANDUP (WEST),  
 MUMBAI - 400 078, MAHARASHTRA, INDIA. Ph: 022-2596 9769 / 2596 9770 Telefax: 91-22-2596 2147  
 E-mail: info@adtron technologies.com / sales@adtron technologies.com \* Website: www.adtron technologies.com

SUBJECT RO MUMBAI JURISDICTION

To, THE PRINCIPAL V P M'S MAHARSHI PARSHURAM COLLEGE OF ENGINEERING, HEDI GUHAGAR ROAD, AT. VELNESHWAR, TAL : OLHAGAR, RATNAGIRI - 415 729 MAHARASHTRA		DELIVERY CHALLAN		
We thank for your Order No. MPCOEIS/2014/25 DTD. 27/05/2014		No. : 48/14-15. Date : 29/07/2014.		
Sr. No.	Qty	Description	Price Per Unit	Amount (Rs.)
1	01 Nos	Characteristics of SCR		
2	01 Nos	Characteristics of IGBT		
3	01 Nos	SCR & AC Phase Control		
4	01 Nos	Triac & AC Phase Control		
5	01 Nos	1- $\phi$ AC Voltage Controller		
6	01 Nos	3- $\phi$ Full Controlled Bridge Rectifier		
7	01 Nos	Forced Commutation of SCR		
8	01 Nos	1- $\phi$ Full Wave Full Controlled Rectifier		
9	01 Nos	1- $\phi$ SCR Series Inverter		
10	01 Nos	1- $\phi$ SCR Parallel Inverter		
11	01 Nos	Chopper Using MOSFET		
Receiver's Sign		<p style="text-align: center;">             M/s. Salish H. Gharpate            s/c Head.         </p>		
<p>Receiver's Sign</p> <p>Stamp: <i>Stamp</i></p>		<p>ADVANCE ELECTRONIC INDUSTRIES</p> <p></p>		

**Power Electronics Delivery challan.**