Sri Chandrasekharendra Saraswathi Viswa Maha Vidyalaya Department of Electronics and Communication Engineering

		INDEN	T FORM	
	50	E11/2016-17/06/03/2017	Budget Provision	:
ident No.			Head of Account	: Revenue
lame of the Inde	Jiii Co.	J.Vaideeswaran ofessor & HOD	Budget Details	
Designation	: Pro	nessor a nob	Budget Allocation	: Rs.
Department	EC	E	Amount spent so far	:Rs.
epartment	. C f	tware for the new syllabus of	Bills pending for proc Indent placed	:
Purpose	: 501	/LSI Design Lab	Balance Available	: : Rs.
			Present Proposal	
	S.No.	Description of the Item	Quantity	Estimated Cost (Rs.)
	0.110.			3,60,000
	1.	IC Nanometer Design	1(50 Users) 1(50 Users)	3,60,000
	2.	Design, Verification and Te	est 1(50 discret	7,20,000
				A A A
	nter Note (if n	ecessary)		the sh horowith
Inder	iter Note (II II	coood it itoms	iustification & supplier na	mes attach herewith.
Inder 1	. The above	item(s) is/are proprietary items, items are additional requiremen	justification & supplier na t, stock on hand details fi	urnished herewith.
Inder 1 2	The above The above	item(s) is/are proprietary items, items are additional requiremen	justification & supplier na t, stock on hand details fi	urnished herewith.
2	2. The above	Items are additional roquine	Sigr	nature of Indenter ate: 07 MARCH 201
Remarks & Re	2. The above	Items are additional roquine	Sigr	nature of Indenter
Remarks & Re Dean	2. The above	By:	Sigr Da	nature of Indenter ate: 07 MARCH 201
Remarks & Re Dean	2. The above	Items are additional roquine	Sigr Da App	nature of Indenter

Supplie	r List
1	CoreEL Technologies India PVI.Ltd. 21, First block, 7 th Main, Koramangala, Bangalore - 560 034. Ph: 918041970400 Email: gapesh n@coreel.com,sadiya.a@coreel.com
2	Trident Tech Labs Pvt.Ltd. "Mamanji Centre" S-7, 3 rd Floor, Thiru-vi-ka Industrial Estate, Guindy, Chennai - 32,Ph:044-43358484. Email: v.barani@tridenttechlabs.com
3	Email: V.Barahlegrider Entuple Technologies Pvt. Ltd 2730,80 Feet Road,HAL 3 rd Stage, Indira Nagar, Bangalore - 560 038 Ph: 080-30723692



Sri Chandrasekharendra Saraswathi Viswa Maha Vidyalaya University

INDENT FORM

Indent No.	: ECE01/2017-18/21.06.2017	Budget P	Budget Provision		: Yes		
Name of the Indenter	: Dr.J.Vaideeswaran	Head of A	Account	: Capital (Lab Equipments			
Designation	: Professor & HOD	Budget I	Details				
Department Purpose	: ECE : To Replace fault equipments.	·	Budget Allo Amount spe Bills pendin Indent place Balance Av	ent so far ng for process ed	: Nil/- : Rs /-		
	23		Present Pro	posal	: Rs. /-		

S.No	Description of the item	Quantity (Nos)	Estimated Cost (Rs)
1 -	Optical Power Meter(Scientech Make, Model No.ST2551) Range : 0 dBm to -60 dBm Display : 12 mm LCD	1No	Rs11,000.00
2	Wavelength : 660 & 950 nm Table Fan - 250mm Non oscillation metal type,65w(Cooling fan for Microwave bench)	2Nos	Rs.3,600.00
		TOTAL	Rs. 14,600.00/-

Indenter Note (if necessary)

- 1. The above item(s) is/are proprietary items, justification & supplier names attach herewith.
- 2. The above items are additional requirement, stock on hand details furnished herewith.

2106 201 T. Kai

Signature of Indenter Date:

Approved by

Registrar / Vice-Chancellor

Supplier list : 1. M/s.Bestmach,Plot No.2/4,J.S.Tower,G4 block - A,Avvaiyar street, Meenambakkam, Chennai - 27,Ph.9381023045,044 - 22561686.

2. M/s.Scientech Technologies Pvt.Ltd,94 101, Pardeshipura, Electronic Complex, Indore - 452010. Email: spawar@scientech.bz, (+91) 9755591500

Remarks & Recommended By: Dean



Sri Chandrasekharendra Saraswathi Viswa Maha Vidyalaya Department of Electronics and Communication Engineering

INDENT FORM

Indent No.	: ECE13/2016-17/01.02.2017	Budget Provision :
Name of the Indenter	: Dr.J.Vaideeswaran	Head of Account : Revenue
Designation	: Professor & HOD	Budget Details
Department	ECE	Budget Allocation : Rs. Amount spent so far :Rs.
Purpose	: Communication kits for the new Syllabus of Analog communication La	Bills pending for process : Indent placed : Balance Available : Present Proposal : Rs.1.10.000/-

S.No.	Description of the Item	Quantity	Estimated Cost (Rs.)
1-			
r	Amplitude Modulation & Demodulation Kit	02	17000
2	Frequency Modulation & Demodulation Kit	02	25000
3	SSB Modulation & Demodulation Kit	02	19000
4	DSB - SC Modulation & Demodulation Kit	02	19000
5	IF - Tuning Amplifier Kit	02	10000
6	PAM ,PWM&PPMModulation & Demodulation Kit	02	20000
	TOTAL		Rs.1,10,000

Indenter Note (if necessary)

- 1. The above item(s) is/are proprietary items, justification & supplier names attach herewith.
- 2. The above items are additional requirement, stock on hand details furnished herewith.

Remarks & Recommended By: Dean

J. Signature of Indenter 01.02.2017 Date:

Approved by

Registrar / Vice-Chancellor



2 : 044 - 27264301, 27264308, 27264293 Fax : 044 - 27264285

SRI CHANDRASEKHARENDRA SARASWATHI VISWA MAHAVIDYALAYA (Declared as Deemed to be University Established Under Section 3 of the UGC Act 1956, Govt.of India)

Enathur, Kanchipuram - 631 561.

PURCHASE ORDER / WORK ORDER

No. P.0.9/2017-18/ DOC 68

M/s. CoreEL Technologies (1) Pvt. Ltd.,

Date

13.4.2017

M/s.

21. I st Block, 7th Main.

Koramangala, Bangalore - 560 034.

Sir / Madam

UPT/16-17/South/MG/SV/950-Discounted

7.4.2017

Your quotation No._____

_____dt____ the purchase / work order on you as per Conditions detailed overleaf for :is accepted and we place

	Quantity	Rate		Rate	
Purchase of Software – ECE Mentor Graphics HEP category 1-IC Design/ Custom IC Design – Back end – 50 User License Mentor Graphics HEP category 2 – Design & Verification – front end – 50 user license TOTAL TOTAL Payment: 100% advance along with the PO Tax: Extra Other terms as per your quotation	1 1	Rs.	P	Rs. 6,50,000	P 00

Vendor acknowledgement copy enclosed. his order and confirm your acceptance by signing & returning to us the

To

-Cc to

Acknowledgement 2. Finance 3 Indentor

1. Vendor

Thanking you Yours Sincerely Signature Name

REGISTRAR



TIN No:33120845623 CST No: 1016858/03.11.10 Area code:043

2 / 4, J.S Tower, G-4 Block A, Avvaiyar Street Meenambakkam, Chennai - 600027 Tel / Fax : 044-22561686, Hp : 93810 23045 & 94441 8058

TAX INVOICE

Invoice#	BM/INV/17-18/009
Invoice Date	31/08/2017
Due Date	10/09/2017
P.O.#	34/17-18/D0869

Bill To The Dean, SCSVMV University Dept. OF ECE Enathur Kanchipuram Tamilnadu 631561

Place Of Supply: Tamil Nadu (33)

S. No	Make / Model	Item / Description	Qty	Rate	CGST	SGST	Amount B/F Tax
1	Optical Power Meter -2551 SKU : 2551	Suitable for SCIENTECH optical trainer, Measures two wavelengths(660 to 950 nm),Measurement range :0 dbm to -60 dbm and auto reading(SMA connector)	1.00 No	10,135.6 0	912.20 9%	912.20 9%	10,135.60
	HSN: 9031						1 0 10 00
2	MTI / FAN SKU : MWFAN	COOLING FAN WITH STAND	2.00 No	974.60	175.43 9%	175.43 9%	1,949.20
	HSN: 9031	· · · · · · · · · · · · · · · · · · ·					
lberr	an in Tess 2.00		and the second	100 m	То	tal B/F Tax	12,084.80
iten	ns in Total 3.00					CGST (9%)	1,087.63
	nks for your busines iness	ss.We look forward your valuable enquiry and f	urther			SGST (9%)	1,087.63
DUS	11(255				A	djustment	(-) 0.06
				•	ſ	Vet Total	Rs.14,260.00
				To	tal In Words:	Rupees for	urteen thousand two

hundred sixty

BANK / NEFT details

Account Name	: BESTMACH
Ac No	: 3956639277
IFSC	: CBIN0283176
GSTIN	: 33AKFPM8417L1ZW

Bank : Central Bank Of India : OD A/c Type PAN

: AKFPM8417L

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For BESTMACH

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GSTIN: 33AKFPM8417L1ZW

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BANK DETAILS: BANK: STATE BANK OF INDL BRANCH: PORUR A/c. No.: 34328574675 IFSC CODE: SBIN0005200	4		CONH	CHENNAL D		6*)	is not resp	once s oonsi nder dem	sold will not ble for any l takes to sub and.Dispute	oss or omit pi es if an	damaged of rescribted S	í good: T decl bject t	in transit aration to
Received the above materia Seal / Signature: Name & Mobile No.: Date:	ls in goo	od con	idition		2						g sed Signat		

Department of Computer Science and Engineering

Research project

Controlling Umbrella through Internet

This project is about to control umbrella through internet or remote from anywhere in the world. For this we used NODEMCU it is a arduino based wifi micro controlled having various GPIO pins and many more. It also used to connect with any wifi network easily.

This project require the following components

- 1. NodeMCU microcontroller
- 2. DC motor with 5v
- 3. DC adapter to supply volts to the dc motor and microcontroller
- 4. Umbrella
- 5. Plastic gear to hit the stat button open camera
- 6. Handling plates to hold all the components
- 7. Mobile app with MQTT enable software app to on and off the umbrella

Working

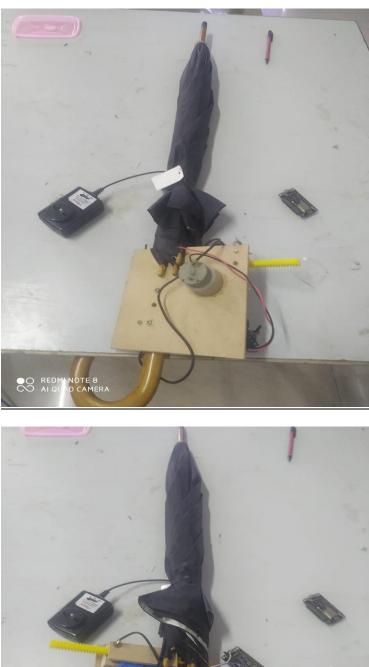
- 1. Connect NodeMCU with campuswifi through username and password
- 2. Write the code to receive command from your mobile through internet connection
- 3. Read the command through serial
- 4. Check the serial command received
- 5. If it's one means it send to the GPIO pin of the NodeMCU
- 6. Then the rotate the dc motor receive the signal from the GPIO and it rotate it and hit the gear rod on the umbrella button
- 7. Then the umbrella will open.

App used in the mobile

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MQTT Dash		<u>!</u>	•	\oplus
Home				
My MQTT broker				
Mom's house				
Servers' health				
My lab				
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Complete Setup

REDM





Cost spent for this project: Rs.18,000

Microsystems Pvt. LteORKS:Plot No. 75, Electronics Estate, Perungu Chennai - 600 096.,Phone : 24961842,24961852 Fax :24961Email : sales@vimicrosystems.comGSTIN: 33AAACV090Our Ref.: V18/QTN/158Our Ref Date: 28-Nov-2018DateOfPreparation: 15-Apr-2019,Time & Date of Removal: -	di, 536 99J1ZJ 8	asystems, a	Addre	VISWA ENATI KANC DICE NO : E : fo : tte :	IANDI A MAI HUR HEEP F/00 15-A F/000	RASEKHA HAVIDYA PURAM (02 .pr-2019	LAY.		SWATHI
Mode of Transport : - RG 23A PII/PLA S.No : -			Po Da			un-2019			
SNO ITEM DESCRIPTION	HSN	QTY	RATE	AMOUNT		SGST		CGST	
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ARM-7 LPC 2148 EMBEDDED BOARD (VI-2148 SB)	9023	5	13,500.00	67,500.00	9.0	6,075.00	9.0	6,075.00	79,650.00
								•	
TOTAL		5	13,500.00	67,500.00		6,075.00		6,075.00	79,650.00
					SG CG SU	SICVALUE ST @ 9 % ST @ 9 % B TOTAL TAL VALU	1		67,500.00 6,075.00 6,075.00 79,650.00 79,650.00
Total Value (In Words) Seventy Nine Thousands Siz Certificate that the particulars give the amount indicated represents the pr there is no flow of additional considera the buyer. Subject to chennai Jurisdiction.	n above true	e and co charged	rrect and and that	1	fo			tems Pvt. Lta	

Checked

Authorised Signatory



NAME OF THE LAB: EMBEDDED SYSTEM DESIGN –BEEF186P80

The Embedded system design Laboratory for B.E –Electrical and Electronics Engineering was setup during 2019-2020. The laboratory equipments were developed by the students of Department of EEE and faculty members for research purpose.

Number of kits developed: 8 Nos.

- 1. LPC 2148 ARM Micro controller Development Board 4 Nos.
- 2. Arduino Development Board 4 Nos.

Total Amount: Rs.43,000/-

List of Experiments:

- 1. PROGRAM TO ACCESS THE LED
- 2. PROGRAM TO READ SWITCH STATUS AND DISPLAYED IN POINT LEDS.
- 3. INTERFACE THE BUZZER
- 4. WAVEFORM GENERATION USING 10 BIT DAC
- 5. PULSE WIDTH MODULATION (PWM) WAVEFORM GENERATION
- 6. TRANSMISSION FROM KIT AND RECEPTION FROM PC USING SERIAL PORT (UART)
- 7. TEMPERATURE SENSOR (LM 35) INTERFACE
- 8. STUDY OF EXTERNAL INTERRUPTS
- 9. RELAY INTERFACE
- 10. INTERFACING OF STEPPER MOTOR

Students Benefited:

- 2020-2021 Batch : 62 Nos.
- 2021-2022 Batch : 19 Nos.

NAME OF THE LAB: POWER SYSTEM PROTECTION AND POWER QUALITY LAB - MPSF192P50

The Power System Protection and Power Quality Laboratory for M.E – Power system was set up during 2019-2020. The laboratory equipments were developed by the students of Department of EEE and faculty members for research purpose.

Number of kits developed : 12

Amount : Rs.2,95,000/-

LIST OF EXPERIMENTS:

POWER SYSTEM PROTECTION LAB

- 1. 3.Ferranti effect of Single phase Transmission Line
- 2. 4. OV/UV Under Frequency Relay
- 3. 5. Transformer Protection simulator
- 4. 6. M/C Based Over Current Relay
- 5. 7. M/C Based Earth Fault Relay
- 6. 8. Motor Protection Relay Simulator
- 7. 9. Automatic Power Factor Correction Relay Trainer
- 8. 10. Single phase Cascaded MLI (Multilevel Inverter) Trainer
- 9. 11. Generation of SPWM pulses for 3 phase Voltage Source Inverter
- 10. 12. Microcontroller based Reverse power Relay

POWER QUALITY LAB

- 1. 1.Single Phase TCS Simulator
- 2. Single phase FC-TCR Simulator

> STUDENTS BENEFITED:

2019-2020: 7

2020-2021: 11

2021-2022: 35

Encl: Invoice

PROFORMA INVOICE





POWER LAB INSTRUMENTS Plot.No.202B (1st Floor), 2nd Main Road, Burma Colony, Perungudi,Chennai 600 096.Tamil Nadu, India. Cell: 9445383014, 9445481054, Ph:044 42347878. Mail:powerlabinstruments@gmail.com Web:www.powerlabinstruments.com. GSTIN : 33AAMFP1958N1ZO.

இதனை இதனால் இவன்முடிக்கும் என்றாய்ந்து அதனை அவன்கண் விடல்.

Buyer/Customer Name:

The Head of the Department, Department of Electrical & Electronics Engineering Sri Chandrasekharendra Saraswathi Viswa Mahavidyalaya (Deemed to be University) Kancheepuram, Tamilnadu

Invoice Number Invoice Date	: 085/2017-18 : 26.03.2018
Buyer's Order Reference	: By mail
Buyer's Order Date	: 24.02.2018

Dispa	tch Document Number & Date Mode of dispatch By Road Dispatched to EEE-	SCSVM	V HSN	CODE : 9023
S.N	Description of Goods	Qty	Rate	Amount
01	Single Phase TCS Simulator	1	25,000.00	25,000.00
02	Ferranti effect of Single phase Transmission Line	1	25,000.00	25,000.00
03	OV/UV Under Frequency Relay	1	25,000.00	25,000.00
04	Transformer Protection simulator	1	25,000.00	25,000.00
05	Single phase FC-TCR Simulator	1	25,000.00	25,000.00
06	M/C Based Over Current Relay	1	25,000.00	25,000.00
07	M/C Based Earth Fault Relay	1	25,000.00	25,000.00
08	Motor Protection Relay Simulator	1	25,000.00	25,000.00
09	Automatic Power Factor Correction Relay Trainer	1	25,000.00	25,000.00
10	Single phase Cascaded MLI (Multilevel Inverter) Trainer	1	25,000.00	25,000.00
11	Generation of SPWM pulses for 3 phase Voltage Source Inverter	1	20,000.00	20,000.00
12	Microcontroller based Reverse power Relay	1	25,000.00	25,000.00
Amou	nt Chargeable (in Words)		Sub Total	2,95,000.00
	Rupees Two lakhs Ninety five thousand Only.	L	GST@ 9% CGST@ 9%	Included Included
	ration : We declare that this invoice shows the actual price of the goods described		0	
	at all particulars are true and correct. All disputes subject to Chennai Jurisdiction only. ner Signature with Seal		rand Total	2,95,000.00 B INSTRUMENTS
Custor	ALE SIGNATULE WITH SEAL	FO		

OursBank : State Bank of India, A/C No. 34880537164, Sholinganallur Branch, IFSC SBIN0010525. [Invoice Prepared by : Shanmugam.K]



Sri Chandrasekharendra Saraswathi Viswa Maha Vidyalaya

	INDEN	<u>r form</u>	012	
Indent No.	: ECE12 /2018-19/04.02.2019	Budget Provision : Yes	- 11	
Name of the Indenter	: Prof.V.Swaminathan	Head of Account : Cap	tal (Lab Equipments)	
Designation	: HOD	Budget Details		
Department Purpose	: ECE : As per AICTE/Student Strength	Budget Allocation Amount spent so far Bills pending for pro Indent placed Balance Available Present Proposal		

S.No	Description of the item	Quantity (Nos)	Estimated Cost (Rs)
1.	KLYSTRON mount with tube Model . X – 2051,Frequency Range:8.2 to 12.4 GHZ Wave guide type:90,Flange type:B9	02	34,000
2	Wave guide detector Mount Model X – 4051,Frequency Range:8.2 to 12.4 GHZ	02	7,000
3	Frequency meter Direct Reading Type Model . X – 4055, Frequency Range: 8.2 to 12.4 GHZ	02	20,000
4	Gunn oscillator	01	5,000
5	PIN modulator with suitable cable	01	3,000
6.	Optical power meter (ST 2551) Wave length 950nm & 650nm	01	17,000
7.'	PCM Modulation & Demodulation Kit	. 01	20,000
		TOTAL	1,06,000 +18%GST

Indenter Note (if necessary)

- 1. The above item(s) is/are proprietary items, justification & supplier names attach herewith.
- 2. The above items are additional requirement, stock on hand details furnished herewith.

Remarks & Recommended By: Dean

Signature of Indenter Date:

Approved by

Registrar / Vice-Chancellor

Supplier List:

1. M/s. Indus Engineering Enterprises, First floor, 88(New No. 79), moore street, Chennai - 600 001.

Ph.044-25248390, 25264395.

2. M/s. VI Micro systems Pvt. Ltd. No:75 ,Electronics Estate,Perungudi,chennai-600 096.Phone: +91-44 2496 1842,2496 1852

sales@vimicrosystems.com

3. Lab Electronics, Old no. 27, New no. 5, 10th Avenue, Ashok Nagar, Chennai -660083, Ph. Phone: +91 44 24892839, email. labelectronics. 86 agmail.com

	PURCHASE ORDER	WORK ORDE	R	on Car
			Date	Dr. Got
No.				5
29/2019-20/ DO	214		*	4.7.2019 15
M/	s. <u>M/s. Indus Engineering Enterpri</u>	ses,		
	1 st Floor, 38, (New #79), Moore	Street,	·	
	Chennai – 600 001			
) Sir / Madam	IEE/QTN/4717	30.4.2019	ic accet	oted and we place
	dt_dt			
the purchase	e / work order on you as per Conditio	ns detailed overlear f	01	Rate
	Description of the Items	Quantity	Rate Rs. P	n
S.No	Description of a			
		-+		
Purch	ase of Lab Equipment for ECE Dep list enclosed			1,18,300 00
As per	list cherosed			
	TOTAL			1,18,300 0
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Tern	ns & Condition: nent:- 50% advance balance against			
deliv	8% Extra		1	
Tax 1			by signing	g & returning to u
Tax 1	nowledge the receipt of this order and	confirm your acceptan	nce by signing	g & returning to u
Tax 1	nowledge the receipt of this order and knowledgement copy enclosed.		nce by signing	g & returning to u
Tax 1 Kindly ack Vendor ach	1. Vendor	Thanking you	nce by signing	g & returning to u
Tax 1	(nowledgement cop) and		the by signing	g & returning to u

1st Floor, 38, (New #79), Moore Street, Chennai - 600 001. Off : 044-25248390, Telefax : 044-25264395 e-mail : indusomska@sancharnet.in, indus_38@rediffmail.com





TAX	INVOICE	Invoice No.	: IEE/19-	20/053	Dat	e:01.0	8.2019	
ГО	SISTRAR	Order No: P. Dated : 04	.0.29/20				0.04.2019	717
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KANCHI	PURAM – 631 561.	Document T	hrough					
S.NO.	NO. DESCRIPTION		GST	QTY	UNIT PF	ICE	AMOUN	IT
			18%		Rs.	Ρ.	Rs.	
1.	KLYSTRON MOUNT WITH KLYSTRON TUBE	->		2 NOS.	20,500	00	41,000	00
2.	WAVE GUIDE DETECTOR WITH MOUNT			2 NOS.	4,500	00	9,000	0
3.	DIRECT READING FREQUENCY METER			2 NOS.	14,000	00	28,000	0
3	GUNN OSCILLATOR			1 NO.	17,000	00	17,000	0
5.	PIN MODULATOR WITH BNC – BNC CABLE			1 NO.	7,300	00	7,300	0
6.	OPTICAL POWER METER MODEL: BPM – 101			1 NO.	16,000	00	16,000	0
	TOTAL			1 Section	No.		1,18,300	C
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		AND NINET	FOUR C	NIY.	UNAND	OTTL		
This is to been char provision	s: ONE LAKH THIRTY NINE THOUSAND FIVE HUNDRED certify that the goods on which the Sales Tax has rged is not more than what is payable under the of relevant Act of the rules made there under. further We are registered as dealers in the State vadu under local Registration No. 0000428/96-97	s immediately after ne Carriers. M be charged extra if	Area C CST.No TIN N	:0000428/96-97 ode: 001 o.65390 / Dt : 8-3 O: 33270000	5-96.	or Indus E	ngineering Enter	rpri

Test & Measuring Instrument, Bio-Medical Instrument, Educational Training Equipment, Microprocessor Development System, Power Electronics,



Sri Chandrasekharendra Saraswathi Viswa Maha Vidyalaya

	INDE	NT FORM			
Indent No. Name of the Indenter	: ECE13 /2018-19/04.02.2019 : Prof.V.Swaminathan	Budget Pro Head of Ac Budget De	count	: Yes : Capital (I	Lab Equipments)
Designation	: HOD	Γ	Budget Allo Amount sper Bills pendin	nt so far	: Rs. /- : Nil,/- : Nil,/-
Department Purpose	: ECE : As per AICTE/Student Strength		Indent place Balance Ave Present Prop	d ailable	: Nil/- : Rs /- : Rs. 1,45,000/ -

		Quantity (Nos)	Estimated Cost (RS)	
.No	Description of the item	01	90,000	
1.	Spectrum analyser	01	15,000	
2	PLL multiplier Kit	01	10,000	
3	PLL synthesizer Kit	01	10,000	
4	Instrumentation amplifier kit	01	5,000	
5	Colpitt's oscillator kit(Using transistor)	01	5,000	
6.	Hartley oscillator kit	01	5,000	
7.	u.D. ideo kit		5,000	
8.	Schering's bridge kit	01	0,000	
0.		TOT	AL 1,45,000+18%GST	

Indenter Note (if necessary)

1. The above item(s) is/are proprietary items, justification & supplier names attach herewith. 2. The above items are additional requirement, stock on hand details furnished herewith.

Signature of Indenter Date:

Remarks & Recommended By: Dean

Approved by

Registrar / Vice-Chancellor

- 2.Pantech Prolabs India Pvt Ltd.No.8, Natarajan Street,Nookampalayam Road, Chemmencherry, Sholinganallur,
- Chennai-600 119.Phone: 91 72000 84084, sales@pantechsolutions.net, enquiry@pantechsolutions.net 3.M/s.Bestmach,2/4, J. S. Tower, G-4, Block A, Avvaiyar Street, Meenambakkam, Chennai - 600027, Tamil Nadu, India ph:
- 4. M/s.Agilent technologies india Pvt. Ltd, No.1, Olympia tech park, regus Olympia, sideo industrial estate, guindy, Chennai 32
- ph. 044 42994085,42994311(For S.No:1)

a : 044 - 27264301, 27264308, 27264293 Fax : 044-27264285

SRI CHANDRASEKHARENDRA SARASWATHI VISWA MAHAVIDYALAYA

(Declared as Deemed to be University Established Under Section 3 of the UGC Act 1956, Govt of India) Enathur, Kanchipuram - 631 561.

						Sector Barris	
		PURCHASE ORDER	R / WORK OF	RDER		Ar	Gh
	Nổ.					20	
P.O.	30/2019-20/ Doスバク M/s。			Date	••• •	4.7.2019	6
		2/4, JS Tower, G4 Block-A Av Street	walyar			-	12
-		Meenambakkam, Chennai – 60	00 027		•	-	
9	Sir / Madam Your quotation the purchase / work	BM/QUOT/19-20/05		in new	epted	- and we pl	ace
		order on you as per Conditions	detailed overleaf	for :-			
	S.No	Description of the Items	Quantity	Rate Rs. F	Rs	Rate	
	Purchase of As per list encl	Lab Equipment for ECE Dept. losed				1,91,579	00
	Ferms & Cond Payment:- 50% GST: Included	TOTAL lition: advance balance against delivery				1,91,579	00
Kir Ve To Cc	1. Vendor Acknowle to 2. Financ 3. Indento 4. Purcha	edgement Yours Sind re Signature or Name Designatio	you Cerely	signing & re	eturnir	ng to us th Fi/19 (P.T.O.)	e



TIN: 33AKFPM8417L1ZW

Bill To

The HOD, SCSVMV University Dept. OF ECE Enathur,Kanchipuram,Tamilnadu,631561

Place Of Supply: Tamil Nadu (33)

TIN No:33120845623 CST No: 1016858/03.11.10 Area code:043

2 / 4, J.S Tower, G-4 Block A, Avvaiyar Street Meenambakkam, Chennai - 600027 Tel / Fax : 044-22561686, Hp : 93810 23045 & 94441 80586

TAX INVOICE

Invoice#	BM/INV/19-20/084
Invoice Date	04/11/2019
P.O.#	P.O No:30 / 2019-20 / D0215 date 4-7-19

S. No	Make / Model	Item / Description	HSN	Qty	Rate	CGST	SGST	Amount B /F Tax
1	RIGOL / DSA 815-TG SKU : 815	RIGOL - Spectrum Analyzer 9 kHz to 1.5 GHz , Tracking Generator 100 kHz to 1.5 GHz , S.No: DSA8A213900980	9030	1.00 No	131,10 0.00	11,799 .00	11,799 .00	131,100.0 0
2	BEST MACH / * PLL SKU : BH-PLL	Frequency multiplexer Trainer Frequency doubler, trippler and synthesizer	9023	1.00 No	5,890. 00	530.10	530.10	5,890.00
3	MARS / Instrumentatio n Amplifier Trainer Kit SKU : ME645	Instrumentation Amplifier Trainer Kit	9023	1.00 No	5,700. 00	513.00	513.00	5,700.00
4	MARS / Colpitt's oscillator Trainer Kit SKU : ME662	Colpitt's oscillator Trainer Kit	9023	1.00 No	2,517. 50	226.58	226.58	2,517.5
5	MARS / Hartley Oscillator Trainer Kit SKU : ME661	Hartley Oscillator Trainer Kit	9023	1.00 No	2,517. 50	226.58	226.58	2,517.5
6	MARS / Maxwell Bridge Trainer Kit SKU : ME2204E	Maxwell Bridge Trainer Kit	9023	1.00 No	6,745. 00	607.05	607.05	6,745.(
7	MARS / Schering Bridge Trainer Kit SKU : ME2201E	Schering Bridge Trainer Kit	9023	1.00 No	7,885. 00	709.64	709.64	7,885.

Thanks for your business.We look forward your valuable enquiry and further business...

Net Total	Rs.191,579.00
Rounding	0.10
SGST (9%)	14,611.95
CGST (9%)	14,611.95
Total B/F Tax	162,355.00



Total In Words: Rupees One Lakh Ninety-One Thousand Five Hundred



"Arduino based RF controlled vehicle for chess coin movement"

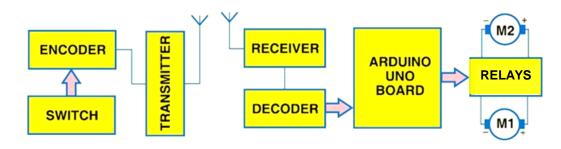
Introduction

Here we present an Arduino based RF controlled vehicle for chess coin movement. It can be driven remotely also this will be move in 360 degree (in all directions). The RF remote control provides the advantage of a good controlling range up to 100 meters with proper antennae, in addition to receiving signals from or transmitting in all directions. The vehicle control unit developed by Arduino UNO board which is an open source electronics prototyping platform based on customized program which is called embedded c. In this project we have used two number of high starting torque PMDC motor connected with two driven wheels which is operated by 24 v dc lithium battery and the vehicle can be capable to move the load upto 20 kg.

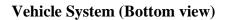
Vehicle Specifications

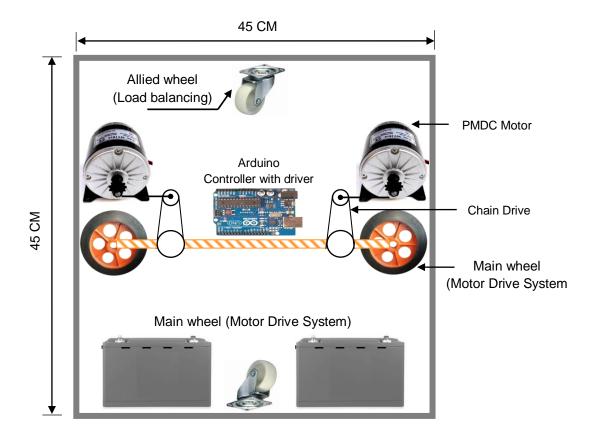
Total weight	: 9 Kg
Dimensions (in cm)	:45 L :45 B: 19 H
Wheel diameter	: 14 CM
Speed in RPM	: 40 Rpm
Load Capacity	: 20 kg
Motor Type and Rating	: PMDC Motor / High torque, 24 V DC, 200W, (2 Nos.)
Battery	: 12V, 9 AmpHr, Lithium Type (2 Nos.)
Development Cost (Approximately)	: Rs.27,000/-

BLOCK DIAGRAM

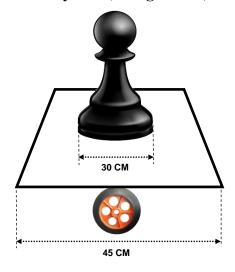


PROTOTYPE COMPONENTS LAYOUT





Vehicle System (Straight view)



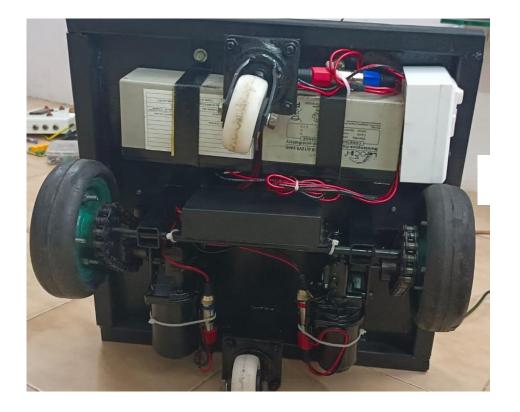
IMPLEMENTATION OF REAL TIME PROTOTYPE





Vehicle System (Straight view)

Vehicle System (Side view)



Vehicle System (Bottom view)

AJANTHA TECHNOLOGY

NO,30 NARASINGAPURAM ST MOUNT ROAD

Chennai – 600 002, India.

Mob: +91 9962721344 / 8939487733 | Mail : Ajanthatechnology1987@gmail.com |

		Date					
		Quote No Company's GSTIN 33AWDPA64				/DPA6432D1Z8	
S.No.	Description of Goods	Quantity				Amount (Rs.)	
5.140.	Description of Goods	Quantity		Nate	Amount (N3.)		
1	HIGH TORQUE DC MOTOR	2	Rs.	4,000.00	Rs.	8,000.00	
2	WHEEL	2	Rs.	4,000.00	Rs.	1,000.00	
3	DUMMY WHEEL	2	Rs.	250.00	Rs.	500.00	
4		2		250.00		350.00	
-		_	Rs.		Rs.		
5	SPROCKET	4	Rs.	150.00	Rs.	600.00	
6	45 CM TO 45 CM SHEET	1	Rs.	1,200.00	Rs.	1,200.00	
7	12V 9AMP BATTERY	2	Rs.	1,100.00	Rs.	2,200.00	
8	BALL BEARING	2	Rs.	100.00	Rs.	200.00	
9	8MM ROD	1	Rs.	250.00	Rs.	250.00	
10	1" INCH SQUARE PIPE	10FEET	Rs.	50.00	Rs.	500.00	
11	WIRE	3M	Rs.	25.00	Rs.	75.00	
12	REMOTE KIT	1	Rs.	3,500.00	Rs.	3,500.00	
13	NET AND BOLD	12 SET	Rs.	25.00	Rs.	300.00	
14	LABER		Rs.	7,000.00	Rs.	7,000.00	
15	15 BATTERY CHARGER		Rs.	1,300.00	Rs.	1,300.00	
	Tota	I			Rs.	26,975.00	
Terms	:						
Durati	on : 2 weeks from the date of realization of 1st	Payment					
Payme	ent Terms :						
1st Pa	yment - 75% as advance						
2nd Pa	yment - 25% at the time of delivery						
BANK	DETAILS	For AJANTHA TECHNOLOGY					
BANK	NAME INDIAN BANK	κ					
BANK	BRANCH ANNA SALAI						
ACCOL	INT NAME AJANTHA TECHNOLOGY						
ACCOL	JNT TYPE CURRENT ACCOUNT						
ACCOL	JNT NO 7128336301				Author	ised Signatory	
IFSC CO	DDE IDIB000A089						

SRI CHANDRASEKHARENDRA SARASWATHI VISWA MAHAVIDYALAYA [SCSVMV]



(Deemed to be University u/s 3 of the UGC Act, 1956) Accredited with "A" Grade by NAAC



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

SMART LIGHTING SYSTEM REPORT

05.10.2021

- Smart Lighting System is very compact unit. It consist of solar panel, LED light, LDR, PIR senor and lithium iron battery.
- Smart Lighting system installed and tested with two number of light with existing pole on 04.10.2021 at our Vinayagar temple towards first year block road.
- The following features are observed from the smart lighting system.
 - a) ON OFF control with Remote
 - b) Standard LDR Mode
 - c) Rader Mode using PIR Sensor (100 % brightness when image crossing around 25
 - feet radius; 30 % brightness if no image sensed.)
 - d) Can operate the lamp Constant 100 % Brightness
 - e) Also with Constant 30 % Brightness
- Specifications of Smart Lighting (as we installed)
 - a) Power: 60 Watt
 - b) Battery Charging time: 5 7 Hrs.
 - c) Battery Capacity: 20,000 MAH (74 WHr.)
 - d) Input Voltage: 3.7 V DC Only
 - e) Beam Angle: 120°
 - f) Lumens: 120lm n/watt
 - g) CRI: > 80

h) LDR operate @ < 400 Lux irrespective of sunrise and sunset (ambient illumination)

i) 40 Watts light = Rs.2100/-; 60 Watts = Rs.2700/-

Standard LDR Mode



Rader Mode using PIR Sensor (100 % brightness when image crossing around 25 feet radius; 30 % brightness if no image sensed.)



Live Demo Video Link:<u>https://drive.google.com/file/d/19NO_pfdbuQEioshTgGBck_dVku48xyg5/view?usp=drivesdk</u>

Smart Lighting Project Team Department of EEE

GSTIN : 33AYXPN1089M1ZL ESTIMATE Mob : 9791919876 / 8825998668 **RASI ELECTRICAL AND HARDWARES** No. 3, Military Road, Orikkai, Kanchipuram - 631502 Date: 03 9 2021. No. 14 Name SCSVMV University Gnathur - Kpm. RATE AMOUNT PARTICULARS QTY. Dc - Aqua - Solar hight NO. 2100 (coith Remote) - AOW. Dc - Agna - Solar light NO (with Romote) - 6000 2700 A800 hmetred only Ryppes four thousand Right Variationian PH 8

Р

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Vi	Microsystems Pvt. Ltd.								
Plot No. 75,Elelctronics Estate Perungudi,Chennai-600 096. Sales Ph:24961842,24961852 Accts. Ph:2496 0774 Fax:24961536 Email:sales@vimicrosystems.com		PAN No. GST In.			AAACV0909J : 33AAACV0909J1ZJ				
ТО		No. P/0012			Date 08-July-2021				
THE REGISTRAR SRI CHANDRASEKHARENDRA SARASWATHI VISWA MAHAVIDYALAYA,		Delivery Note							
		Order Ref :							
ENATI KANC	HUR HEEPURAM631 561	Our Ref							
	Description	HSN	Qty	Ra	te		Amount		
SI.No					₹	Р	₹		
. 1.	8086 Microprocessor Trainer Kit	9023	02	5,74	6	00	11,492	00	
	(Micro-86 LCD)								
	a to grand which is an								
			Add: Add:	Basic Price CGST@ 9% SGST@ 9% Round off			11,492 1,034 1,034 (-)	00 28 28 56	
			- -	*					
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			Tota	1		13,560	00		
Subject to	es in words: Thirteen Thousand Five Hundred an	nd Sixty	Only Solosie	private one teres conto teres provide teres	10-1	200		Ltd.	
Prepared	Checked	•.		1 × Che	Auti	horised S	Signatory	<u> </u>	
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INVOICE

Vi	Microsystems Pvt. Ltd.								
Perungudi, Sales Ph:24 Fax:24961	5,Elelctronics Estate Chennai-600 096. 4961842,24961852 Accts. Ph:2496 0774 536 s@vimicrosystems.com			PAN No. GST In.		ACV0909			
то	ro No. P/00			3 Date 08-July-2021					
	EGISTRAR	Delivery Note							
VISWA	IANDRASEKHARENDRA SARASWATHI MAHAVIDYALAYA,	Order R	Ref <u>:</u>						
ENATI KANCI	IUR HEEPURAM631 561	Our Re	f					······	
	Description	HSN	Qty	Rate			Amount		
SI.No		HOIN			₹	Р	₹	Р	
1.	8051 Micro Controller Trainer Kit (Micro – 51 LC LCD)	9023	02	5,55	1	00	11,102	00	
			Add: Add:	Basic Price CGST@ 9% SGST@ 9% Round off			11,102 999 999 (-)	00 18 18 36	
				3					
				Tota	1		13,100	00	
Rupee	s in words : Thirteen Thousand One Hundred On	nly	MS P	rivate	fo	rVi Mi	crosystems Pvt.	Ltd.	
Subject to	Chennai Jurisdiction		(10) (10) (10) (10) (10) (10) (10) (10)		2-6	فعولى	≫e Juer		
Prepared	Checked	· .	NA.	* Chanti			Signatory		