

Accredited by NAAC with 'B+' Grade, 2(f) & 12B Status Institution by UGC

IG Valley, Madurai Main Road, Manikandam, Tiruchirappalli - 620012

# **NAAC DOCUMENTS**

**QUALITY INDICATOR FRAME WORK** 

**CRITERION – 1** 

# **CURRICULAR ASPECTS**

SUBMITTED BY

**IQAC** 

INTERNAL QUALITY ASSURANCE CELL INDRA GANESAN COLLEGE OF ENGINEERING





#### DEPARTMENT OF ELECTRICAL AND ELECTRINICE ENGINEERING

#### ACADEMIC YEAR 2018-2019 / EVEN SEMESTER

### 1.2 Academic Flexibility (30)

1.2.1 Number of Certificate/Value added courses offered and online courses of MOOCs, SWAYAM, NPTEL etc. (where the students of the institution have enrolled and successfully completed during the last five years)

#### AND

1.2.2 Percentage of students enrolled in Certificate/ Value added courses and also completed online courses of MOOCs, SWAYAM, NPTEL etc. as against the total number of students during the last five years

VAC Title:	Develop and	Implem	ent of F	Renewa	ble l	Energy system u	using N	MATLAB					
Resource Person:	Traine Micro	1. Ms.G.Vijaya, Trainer, Micro win Automation, Tiruchirappalli-621216					2. Mr.K.Ranganathan, Trainer, Micro win Automation, Tiruchirappalli-621216						
Date of conduct from:	24.06.2019	To:	28.06.	2019	Du	ration:	30 Hours						
Organized Department:	ELECTRICA	L AND	ELEC	TRINI	CE 1	ENGINEERIN(	G						
Participant Year:	EEE- IV, III, II	Semest	er:	EVEN	1	No. of Student Registered:	ts	92					
Venue:	EEE- POWE	R SYST	EM SI	MULA	TIO	N LAB,IGCE							

### **Table of Content**

S. No	Document	Page No
1.	VAC Circular	3-3
2.	VAC Schedule	4-4
3.	List of the Students Participation	5-7
4.	Attendance Of Students	8-12
5.	VAC Test Paper	13-16
6.	VAC Answer Key	17-17
7.	VAC Test Answer Sheet- Sample	18-28
8.	VAC Mark Statement	29-34
9.	VAC Report	35-36
10.	Course Completion Certificates	37-54



### Department of Electrical and Electronics Engineering

### Academic Year 2018-2019 - EVEN Semester

19.06.2019

#### DEPARTMENT CIRCULAR

Department of Electrical and Electronics Engineering of IGCE in association with Micro win Automation, is going to organize Value Added Course for all Second, Third and Final year students on "Develop and Implementation of Renewable Energy systems using MATLAB" from 24.06.2019 to 28.06.2019. Certificates will be issued to the eligible participants at the end of the Course. This training is to be provided in our campus.

Resource Person Detail	<ol> <li>Ms.G.Vijaya,         <ul> <li>Trainer,</li> <li>Micro win Automation,</li> <li>Tiruchirappalli-621216</li> </ul> </li> <li>Mr.K.Ranganathan,         <ul> <li>Trainer,</li> </ul> </li> <li>Micro win Automation,</li> <li>Tiruchirappalli-621216</li> </ol>
Venue	Power System Simulation Lab, IGCE

HOD/EEE

SI. Ma lath

PRINCIPAL

Cc:

- · Principal office
- Class In charges II, III & IV-Year
- II, III & IV-Year EEE Students
- · Office File
- · Notice Board

Dr. G. Balakrishnan, M.E., Ph.D.,

Principal



COLLEGE OF ENGINEERING Madural Main Road (NH-45B), Manikandam, Trichy-12. Approved by AICTE, NewDelhi & Affiliated to Anna University. Chennal

## Value Added Course

"Develop and Implementation of Renewable Energy systems using MATLAB"

### **SYLLABUS**

s.no	TOPIC COVERED	DURATION (in hours)	DATE
1	Introduction to power generation	3	24.06.2019
2	Solar Thermal Power Generation	3	24.06.2019
3	Solar Photovoltaic Power Generation	3	25.06.2019
4	Wind Power Generation	3	25.06.2019
5	Hydro Power Generation	3	26.06.2019
6	Energy Storage, Energy Economics	3	26.06.2019
7	Introduction to power generation using MATLAB design	3	27.06.2019
8	Design and modeling of Solar Photovoltaic Power Generation using MATLAB	3	27.06.2019
9	Design and modeling of Wind Power Generation using MATLAB	3	28.06.2019
10	Design and modeling of Hydro Power Generation using MATLAB	3	28.06.2019
11	Exam	1	28.06.2019
	Total Hours (Excluding Exam)	30	We the second se

VAC Coordinator

HOD/EEE

Gr. Ma lathi

Dr. G. Balakrishnan, M.E., Ph.D.,



# Value Added Course

"Develop and Implementation of Renewable Energy systems using MATLAB"

### STUDENTS PARTICIPATION LIST

S.NO	REG NO	STUDENTS NAME	YEAR/ BRANCH
1	811215105001	AMUDHA. M	IV/EEE
2	811215105002	ANAND.V	IV/EEE
3	811215105003	BALACHANDRAN. M	IV/EEE
4	811215105004	BHUVANESWARI. A	IV/EEE
5	811215105005	DEEPA RAGAVI.M	IV/EEE
6	811215105006	FATHIMA SELVI. C	IV/EEE
7	811215105007	GAJALAKSHMI, B	IV/EEE
8	811215105008	GAYATHRI. R	IV/EEE
9	811215105009	GOMATHI. S	IV/EEE
10	811215105010	GOMATHY. M	IV/EEE
11	811215105011	GOPINATH, R	IV/EEE
12	811215105012	GUNASEELAN. M	IV/EEE
13	811215105013	JERALD FELIX. A	IV/EEE
14	811215105014	KEERTHANA. K	IV/EEE
15	811215105015	MANIKANDAN. M	IV/EEE
16	811215105016	MEENA. S	IV/EEE
17	811215105017	MEENAKSHI, P	IV/EEE
18	811215105018	MOHAMED ANSARI. A	IV/EEE
19	811215105019	MOHAMED IBRAHIM. A	IV/EEE
20	811215105020	NIVETHA. B	IV/EEE
21	811215105021	PRASANTH. R	IV/EEE
22	811215105022	PRIYA. G	IV/EEE
23	811215105023	PRIYANKA. P	IV/EEE
24	811215105024	SATHEESWARI. P	IV/EEE
25	811215105025	SATHISHBABU, K	IV/EEE
26	811215105026	SATHIYAPRIYA. M	IV/EEE
27	811215105027	SELASTEENA RANI. J	IV/EEE
28	811215105028	SHALINI. M	IV/EEE
29	811215105029	SIVA RAMAN. M	IV/EEE
30	811215105030	SIVASAKTHI.A	IV/EEE
31	811215105031	SOPHIYA, T	IV/EEE
	811215105032	SRI GAYATHRI. M	IV/EEE
	811215105033	TAMILSELVI.M	IV/EEE
	811215105034	VANITHA. R	IV/EEE

Dr. G. Balakrishnan, M.E., Ph.D.,



# Indra Ganesan

COLLEGE OF ENGINEERING
Madural Main Road (NW-458), Manikandam, Trichy-12.
Approved by AICTE, NewDelhi & Affiliated to Anna University, Chennal

s.no	REG NO	STUDENTS NAME	YEAR/ BRANCH
35	811215105035	VANITHA. S	IV/EEE
36	811215105036	VASUMATHI. V	IV/EEE
37	811215105037	VIGNESHWARAN. N	IV/EEE
38	811215105038	VIJAYALAKSHMI. R	IV/EEE
39	811215105039	VINOTH. S	IV/EEE
40	811216105001	ATTCHAYA A K	пт/вев
41	811216105003	BENAZIR M	III/EEE
42	811216105004	GUNA SEELAN D	III/EEE
43	811216105005	HARI GOWTHAM M	III/EEE
44	811216105006	HARIHARAN B	III/EEE
45	811216105007	ISWARYA K	III/EEE
46	811216105008	KALISTA P	III/EEE
47	811216105009	KHAJAMOINUDEEN S	III/EEE
48	811216105010	KIRUTHIKA B	III/EEE
49	811216105011	LOURDHU MARY D	П/ЕЕЕ
50	811216105012	MARIA SHOBANA J	III/EÉE
51	811216105014	MERLIN REETA P	III/EEE
52	811216105015	NIROSHINI R	III/EEE
53	811216105016	NITHING A	III/EEE
54	811216105017	PAVENTHAN A	III/EEE
55	811216105018	PRAVEEN KUMAR M	III/EEE
56	811216105019	PRISILLA PRIYANKA	III/EEB
57	811216105020	RAJA V	III/EEE
58	811216105021	RATHINA RAJ R	ш/еее
59	811216105023	RESHMI D	III/EEE
60	811216105024	ROOBINI S	III/EEE
61	811216105025	SURESH K	III/EEE
62	811216105026	SURIYA PRAKASH K	III/EEE
63	811216105027	TAMILARASAN M	III/EEE
64	811216105028	TAMILAZHAGAN M	III/EEE
65	811216105029	VINOTH R	III/EEE
66	811216105302	PARKAVI S	III/EEE
67	811217105005	ARUL JOY ASHA A	II/EEE
68	811217105006	ARUN SEBASTIN P	II/EEE
59	811217105007	BHARTHASARATHI M	II/EEE
	811217105008	CHITHRA P	II/EEE
	811217105009	DEEPIKA G	II/EEE
	811217105010	EZHUMALAI A	II/EEE

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal



Madural Main Road (NH-45B), Manikandam, Trichy-12.
Approved by AICTE, NewDelhi & Affiliated to Anna University, Chennal

S.NO	REG NO	STUDENTS NAME	YEAR/ BRANCH
73	811217105011	GAYATHRI K	II/EEE
74	811217105012	GAYATHRI S	II/EEE
75	811217105013	KANIMOZHI S	IVEEE
76	811217105014	KEERTHANA S	II/EEE
77	811217105015	KUMARIVALLI T	II/EEE
78	811217105016	MADHUMITHA S	II/EEE
79	811217105017	MANO K	II/EEE
80	811217105018	MEKALA M	II/EEE
81	811217105020	PAVITHRA S	II/EEE
82	811217105021	PRAVEEN RAJ R	II/EEE
83	811217105022	RAJASEKAR.N V	II/EEE
84	811217105023	REVATHI P	II/EEE
85	811217105024	RISHON GURU M	II/EEE
86	811217105026	SANTHOSH K	II/EEE
87	811217105027	SRIKUMAR M S	II/EEE
88	811217105028	SRI LOGESH C	II/EEE
89	811217105029	SUBHA T	II/EEE
90	811217105031	VALARMATHI C	II/EEE
91	811217105032	VISWANATH R	II/EEE
92	811217105301	SANJEEV KUMAR R	II/EEE

VAC Coordinator

Gr. Ma Cath

Dr. G. Balakrishnan, M.E., Ph.D.,

**Principal** 

### **Department of Electrical and Electronics Engineering**

Academic Year 2018-2019 - Even Semester

### STUDENTS ATTENDANCE LIST

# Value Added Course

"Develop and Implementation of Renewable Energy systems using MATLAB"

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012.

S.N O	REG NO	STUDENTS NAME	YEAR/ BRANC	24.06	.2019	25.06	5.2019	26.06	5.2019	27.06	i.2019	28.06	5.2019	NO OF SESSIONS	SIGN OF THE
O			Н	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	ATTENDE D	STUDENT
1	811215105001	AMUDHA. M	IV/EEE	-	/		~	<b>/</b>	-	~	1	1	~	10	AMURIA M
2	811215105002	ANAND.V	IV/EEE	V					1	~	/		<b>~</b>	10	AMORD
3	811215105003	BALACHANDRAN, M	IV/EEE		\/	a	- ~	~	-	~		-	V	01	Baladon
4	811215105004	BHUVANESWARI. A	IV/EEE	V	1/		- ~	OL			1		V	9	Bhuj.
5	811215105005	DEEPA RAGAVI.M	IV/EEE	. /			- ~		V	V	CL	/	1	9	Deepa Ragair
6	811215105006	FATHIMA SELVI. C	IV/EEE		CL		V.	V	-	V	اسسا		~	9	Rai
7	811215105007	GAJALAKSHMI. B	IV/EEE		1/	1/	1			-	1	V	V	10	Baia Karosul
8	811215105008	GAYATHRI. R	IV/EEE	~	1/		a		-		-	- /	V	9	Gayoth
9	811215105009	GOMATHI. S	IV/EEE	V			V	/	a	V	1			0	Gamitha
10	811215105010	GOMATHY. M	IV/EEE	Q.			V	~		V	1	~		9	H. Conty
11	811215105011	GOPINATH. R	IV/EEE	V		V	V	V	V	V	1	/		10	R GoPenan
12	811215105012	GUNASEELAN. M	IV/EEE	V	1	V	1/	a	V	1	-	10		C	M. Gunaseela
13	811215105013	JERALD FELIX. A	IV/EEE	1	./	-	-		1/		-	/	V	10	A. L.u.
14	811215105014	KEERTHANA. K	IV/EEE	V					1	-			V	10	Koorte



# Indra Ganesan COLLEGE OF ENGINEERING Madural Main Road (NH-45B), Manikandam, Trichy-12. Approved by AICTE, NewDelhi & Affiliated to Anna University, Chennal

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal

Indra Ganesan College of Engineering
IG Valley, Madurai Main Road

Manikandam Trichy 620 012

S. NO	REG NO	STUDENTS NAME	YEAR/ BRANCH	24.06	5.2019	25.06	5.2019	26.06	5.2019	27.06	5.2019	28.06	.2019	NO OF SESSIONS	SIGNATURE OF THE
			DIVANCE	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	ATTENDED	STUDENT
15	811215105015	MANIKANDAN. M	IV/EEE	/		~		1	1/	a		~	~	a	ИЛ, І
16	811215105016	MEENA. S	IV/EEE	1		a	a				1 -		~	6	Mari Kanda
17	811215105017	MEENAKSHI. P	IV/EEE		1		1/	-		a	a	~		8	Meene
18	811215105018	MOHAMED ANSARI. A	IV/EEE	_	a		1			2	1		1	D Q	Photo A
19	811215105019	MOHAMED IBRAHIM. A	IV/EEE	V	1			V	V		1/			1 D	MAY
20	811215105020	NIVETHA. B	IV/EEE	a	V	./		V		1	1			a	Nile
21	811215105021	PRASANTH, R	IV/EEE	~	1/	a	CL	V	~		- 1		/	(-	0 4
22	811215105022	PRIYA. G	IV/EEE	1/	1/	1	1/	a			1	- ×	V	<u></u>	Double
23	811215105023	PRIYANKA. P	IV/EEE	V	-	~	~	1	V	1	L		V	10	PORT OF THE PARTY
24	811215105024	SATHEESWARI. P	IV/EEE	~			1	1/		1	i/	1	V	10	DO D
25	811215105025	SATHISHBABU, K	IV/EEE	-	1/		1/				1:	7	-1	10	10101
26	811215105026	SATHIYAPRIYA, M	IV/EEE	V	1/	./			1	V	V			10	La Carley
27	811215105027	SELASTEENA RANI. J	IV/EEE	V	a	1		V		V	~	V	v	0,	Selash
28	811215105028	SHALINI, M	IV/EEE	V	1	1 -	1	1,	a	10	1		1	a	July
29	811215105029	SIVA RAMAN. M	IV/EEE	1	1/	a	1		- 1/	- 1 -		V	~	G	Co
30	811215105030	SIVASAKTHI.A	IV/EEE	61			1100	1		L-	100	3/	-	a	Sina Haman
31	811215105031	<b>SOPHIYA.</b> Т	IV/EEE	16	1	1	1/	1/	1/	1		V	V	10	end V
32	811215105032	SRI GAYATHRI. M	IV/EEE	1	1		a		1		1			9	CHAT AT
33	811215105033	TAMILSELVI.M	IV/EEE	1	1	V	10	1.	1	a	a	1/		8	49 011.
34	811215105034	VANITHA. R	IV/EEE	~	1	1		a			1		3	- S	R. Vorritho
35	811215105035	VANITHA. S	IV/EEE	V	1-	1	1	1	1		1	1		10	2 10
36	811215105036	VASUMATHI. V	IV/EEE	/			-		a				/	a	Vas moot



# Indra Ganesan

Madurai Main Road (NH-45B), Mantkandam, Trichy-12.

Approved by AICTE, NewDelhi & Affiliated to Anna University, Chennai

Principal

Principal
Indra Ganesan College of Engineering

IG Walley, Madural Main Road

Manikandam, Trichy-620 012.

S. NO	REG NO	STUDENTS NAME	YEAR/ BRANCH		5.2019	25.06	5.2019	26.06	5.2019	27.06	5.2019	28.06	5.2019	NO OF SESSIONS	SIGNATURE OF THE
				FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	ATTENDED	STUDENT
37	811215105037	VIGNESHWARAN. N	IV/EEE	~	V	レ	~	5	~	1	1	_		10	Vagnarius
38	811215105038	VIJAYALAKSHMI. R	IV/EEE	V	C	1	レ	V	V	1	1	V	· V	10	July culput
39	811215105039	VINOTH. S	IV/EEE	~	1	V	w	V	اسا اسا	4	L	V	-V	10	Vinothis
40	811216105001	ATTCHAYA A K	III/EEE	a	- 1	i_			V	1	- 4		~	9	Andres
41	811216105003	BENAZIR M	III/EEE	V	V	~	a	~	- 1		a		V	8	Rona
42	811216105004	GUNA SEELAN D	III/EEE	V	OL.		1	i	V	V	1/		1	9	Gust.
43	811216105005	HARI GOWTHAM M	III/EEE	V	V	<u></u>	سريا	V	W	V	سيا	0		10	11 07 1
44	811216105006	HARIHARAN B	III/EEE	1	1/	1	V	a	V	1	~			9	Hay Jouen
45	811216105007	ISWARYA K	III/EEE	1/	1		1/	V	U	1/	1		V	10	1
46	811216105008	KALISTA P	III/EEE			1	,	1	10		1		1	10	Isuny rya
47	811216105009	KHAJAMOINUDEEN S	III/EEE				1/	a	1/	1	1			9	have
48	811216105010	KIRUTHIKA B	III/EEE	V		C	a	~	V	1	1	V	/	8	tiarthika
49	811216105011	LOURDHU MARY D	III/EEE				1/	α	a	U	1/			8	Tourdha
50	811216105012	MARIA SHOBANA J	III/EEE	/			1/	1/	1	a	0	~	/	9	0 1
51	811216105014	MERLIN REETA P	III/EEE			1	<u></u>	-سا	L	L	Low			10	Maria Shif
52	811216105015	NIROSHINI R	III/EEE	0 -	1	1	1/	1/	~	1	1	-0	./	9	Mon
53	811216105016	NITHING A	III/EEE	1	1	a	a		1	1			/	8	Nitem
54	811216105017	PAVENTHAN A	III/EEE	1	-	1	1/	1	a	1		$\overline{}$		9	1
55	811216105018	PRAVEEN KUMAR M	III/EEE	~	1	1	1/	1/	1/	1		1	1	-10	paventina
56	811216105019	PRISILLA PRIYANKA	III/EEE	1/	1/	1/	1/	1			a	-	1		Pranoally
57	811216105020	RAJA V	III/EEE		-		1		1	1	1	V	/	10	O al a al
58	811216105021	RATHINA RAJ R	III/EEE	V	/		1	1/	1	1	1	V		10	Rajar
59	811216105023	RESHMI D	III/EEE	~	1/	1	- 1	1	1		1	-	/	10	Rathina Ray

(D):

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012.



# Indra Ganesan

COLLEGE OF ENGINEERING Madural Main Road (NH-45B), Manikandam, Trichy-12. Approved by AICTE, NewDelhi & Affillated to Anna University, Chennal

S. NO	REG NO	STUDENTS NAME	YEAR/ BRANCH	24.0	6.2019	25.06	5.2019	26.06	.2019	27.06	.2019	28.06	5.2019	NO OF SESSIONS	SIGNATURE OF THE
			BRANCH	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	ATTENDED	STUDENT
60	811216105024	ROOBINI S	III/EEE	1	-			a	~			./	· · ·	9	10 1
61	811216105025	SURESH K	III/EEE		-1-	-		v	1/~	CL	QL.				& Oakum
62	811216105026	SURIYA PRAKASH K	III/EEE	a		-	-	1			1		-	8	10. SWIEW
63	811216105027	TAMILARASAN M	III/EEE						<u>ا</u>					10	K Surger
64	811216105028	TAMILAZHAGAN M	III/EEE			a					سا ،	/		0,	M Tany
65	811216105029	VINOTH R	III/EEE			1	1		1	1	V	V			M Tam
66	811216105302	PARKAVI S	III/EEE	V		1					1	~		10	R Vinothy
67	811217105005	ARUL JOY ASHA A	II/EEE		0				. –	1				10	P. Asha
68	811217105006	ARUN SEBASTIN P	II/EEE	V	1	CL	a					-	V	8	
69	811217105007	BHARTHASARATHI M	II/EEE	V	1					a	a			3	P. Aun
70	811217105008	CHITHRA P	II/EEE	1/	1		- ,		a	V			./	a <sub>1</sub>	Chifuet
71	811217105009	DEEPIKA G	II/EEE	~	10				·					10	0
72	811217105010	EZHUMALAI A	II/EEE	~		-	- 1	6	10	0				9	6 1 1
73	811217105011	GAYATHRI K	II/EEE	/	1	V-	1	a	a	100			1	8	Chein
74	811217105012	GAYATHRI S	II/EEE	~	-	1		1	- 1	- 0		1		9	Grayat
75	811217105013	KANIMOZHI S	II/EEE	~	1					OL.	1 -			10	Valles
76	811217105014	KEERTHANA S	II/EEE	~	0-	1		, _						a	CV The
77	811217105015	KUMARIVALLIT	II/EEE	~	1						1			10	V. e li
78	811217105016	MADHUMITHA S	II/EEE	-			1				( -	-/-		10	Responserall
79	811217105017	MANO K	II/EEE	1	1		1				1			10	Mademy he
80	811217105018	MEKALA M	II/EEE				CL							9	Manox
81	811217105020	PAVITHRA S	II/EEE				, ^	a	a		,	/	1	4	Methodon 1
82	811217105021	PRAVEEN RAJ R	II/EEE		1	-					0	/	/	a	Prayeon Ro



S.		STUDENTS NAME	YEAR/	24.06	.2019	25.06	.2019	26.06	.2019	27.06	.2019	28.06	.2019	NO OF SESSIONS	SIGNATURE OF THE
NO	REG NO	210DEM 12 MAINE	BRANCH	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	ATTENDED	STUDENT
83	811217105022	RAJASEKAR.N V	II/EEE	V	~	V	V	~	V	V	レ	-	V		Knyaccakel
84	811217105023	REVATHI P	II/EEE	-	5	a	~	~	V		1	المحملة	Loren	9	Revollen
85	811217105024	RISHON GURU M	II/EEE	~		-	1	1	1	~	~	V	Lower	10	Richardan
86	811217105026	SANTHOSH K	II/EEE	V	V	~		V	~	~		-6		10	bant hoh
87	811217105027	SRIKUMAR M S	II/EEE	<b>~</b>	~		~	a	~	-	~	V	V	9	Bacourt A
88	811217105028	SRI LOGESH C	II/EEE	~	V	V	V	a	CL	V	~	~		5	Ser logeste
89	811217105029	SUBHA T	II/EEE	V	V	a	OL	V	1	V	~	V	V	8	Subha.
90	811217105031	VALARMATHI C	II/EEE	V			~	~	V	a	1	V	1/	9	Valarmot
91	811217105032	VISWANATH R	II/EEE	V	V	~	1	~	V	~	~	V	1	10	Visuand
92	811217105301	SANJEEV KUMAR R	II/EEE	~	V	/	V	-	V	V	a	+ V	1/	17	Suy oal B

VAC Coordinator

Dr. G. Balakrishnan, M.E., Ph.D.,

. Principal

Indra Ganesan College of Engineering IG Valley, Madurai Main Road Manikandam, Trichy-620 012. HoD/EEE



sName of the Student:

Year/Sem:

AU Register Number:

# Value Added Course

"Develop and Implementation of Renewable Energy systems using MATLAB"

<u>MULTIPLE CHOICE QUESTIONS</u> (25X1 = 25 Marks)

1. Based on usability, Energy Resources are classified into					
a) primary, secondary and tertiary resources					
b) primary and secondary resources					
c) primary, secondary, intermediate and tertiary resources					
d) primary, intermediate and secondary resources					
2. Which of the following is not a type of primary resource?					
a) Crude Oil b) Coal c) Hydrogen Energy d) Sunlight					
3. The ratio of energy received from a raw energy source to energy spent to obtain the raw					
energy source is called as					
a) consumption ratio b) fuel ratio c) energy yield ratio d) joule ratio					
4. Energy Resources which are being used for many decades are known as					
a) conventional energy sources b) non-conventional energy sources					
c) primary energy sources d) fuel cells					
5. Which of the statements is correct about Solar Energy?					
a) It is a renewable and conventional source of energy					
b) It is a non-renewable and non-conventional source of energy					
c) It is a renewable and non-conventional source of energy					
d) It is a non-renewable source of energy					
6. Wind and Hydrogen energy are examples of					
a) primary sources b) primary and secondary sources respectively					
c) secondary sources d) tertiary sources					
7. On the basis of long-term availability, resources are classified into					
a) conventional and non-conventional resources					
b) renewable and non-renewable resources					
c) primary and secondary resources  Dr. G. Balakrishnan, M.E., Ph.D.,  Principal					
Indra Ganesan College of Engineering					

IG Valley, Madurai Main Road Manikandam, Trichy-620 012.



8.	Which of these r	esources does 1	not produce Co	O2 during elec	tricity generation?
	a) Coal	b) Methane	c) Uranium	d) Biogas	
9,	On the basis of o	rigin, energy r	esources are cl	assified into n	natural and artificial resources.
	a) True	b) Fal	se		
10.	Which of these	is the major co	ntributor to w	orld pollution	?
	a) Commerc	ial resources	b) Non-Comm	nercial Resource	ces
	c) Renewabl	le Resources	d) Nuclear En	nergy	
11	. Half of the wor	ld's energy ne	eds are fulfille	l by renewabl	e energy sources.
	a) True	b) False			
12	. Which of the e	nergy resource	s were conside	red for large	scale use after the oil crisis of
	1973?				
	a) Convention	onal Sources	b) Non-Conve	entional Source	es
	c) Non-rene	wable sources	d) Primary So	urces	
13	. The unit of ene	rgy yield ratio			
	a) joule	b) wat			d) dimensionless
14	. Which of the st				
	a) It is a renewable and conventional source of energy				
	b) It is a non-renewable and non-conventional source of energy				
	c) It is a renewable and non-conventional source of energy				
	d) It is a non-renewable source of energy				
15	. World Energy				
	a) deforestat	tion b) incr	easing population	on and Industr	ialization
	c) inflation	d) natu	ral calamities		
16	. Which of the fo	ollowing is a di	sadvantage of	Hydro Power	?
	a) They cau	ise deforestation	and affect wile	dlife	Dr. G. Balakrishnan, M.F. Ph.D.
	b) They cau	se harmful emis	ssions		Principal
	c) They are	an unstable sou	rce of energy		Indra Ganesan College of Engineering IG Valley, Madurai Main Road
				4 . 4 . 54 . 44	Manifest Manifest Manifest Model

d) They are not suitable for long-distance electricity transmission

Manikandam, Trichy-620 012.



17. Which of the following statement is true about conventional energy sources?
a) They cause minimum pollution
b) They are available in limited quantity
c) Coal is the most used conventional energy source in the world
d) There are sufficient reserves of Coal, Petroleum and Natural gas for the next 300 years
18. All of the conventional energy sources are Non-Renewable.
a) True b) False
19. To focus on Renewable and Other alternative sources of energy, was established in March 1981 by the Government of India.
a) commission for additional sources of energy
b) commission for alternative sources of energy
c) council of scientific & industrial research
d) centre for science and environment
20. IREDA was developed by the Government of India
a) to implement more efficient methods for using Conventional Energy sources
b) to promote the Development of Non-Conventional Energy Sources
c) to develop Nuclear Energy in India
d) to control pollution
21. Apart from supplying energy, fossil fuels are used for
a) storing energy in solar ponds b) drying Vegetables
c) rotating turbine in Hydro Power plants d) manufacture of Organic Chemicals
22. The only country having a full-fledged ministry for Development of New and Renewable Resources is
a) India b) Bangladesh c) USA d) China
23. Which of the following pollutants are emitted by the burning of fossil fuel?
a) Oxides of Carbon, Nitrogen, and Sulphur
b) Oxides of Carbon, Uranium, and Radium
c) Calcium Halides and Oxides of Nitrogen d) Noble Gases  Dr. G. Balakrishnan, M.E., Ph.E.
Principal  Indra Ganesan College of Engineering

IG Valley, Madurai Main Road Manikandam, Trichy-620 012.



- 24. \_\_\_\_ is a petrochemical and is used as raw material for chemical, pharmaceutical, and paint industry.
  - a) Plutonium
- b) Uranium
- c) Coal
- d) Protactinium
- 25. Which of the following statements is not true about radioactive waste?
  - a) It has radioactivity quotient of dangerous levels.
  - b) The disposed radioactive waste is to be guarded for a long period
  - c) It has low radioactivity quotient
  - d) Its radioactivity decreases with time.

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal



# Value Added Course

"Develop and Implementation of Renewable Energy systems using MATLAB"

### **ANSWER KEY**

1	d	6	ь	11	b	16	a	21	d
2	C	7	b	12	ь	17	b	22	а
3	С	8	c	13	d	18	ь	23	a
4	a	9	b	14	С	19	a	24	c
5	c	10	а	15	ь	20	b	25	c

VAC Coordinator

Dr. G. Balakrishnan, M.E., Ph.D.,

**Principal** 



sName of the Student: Mouno K

Year/Sem: 11/4

AU Register Number: 8 1 2 7 1 0 5 0 1 7

d) commercial and non-commercial resources

# Value Added Course

"Develop and Implementation of Renewable Energy systems using MATLAB"

MULTIPLE CHOICE QUESTIONS (25X1 = 25 Marks)

. Based on usability, Energy Resources are classified into				
a) primary, secondary and tertiary resources				
b) primary and secondary resources				
c) primary, secondary, intermediate and tertiary resources				
d) primary, intermediate and secondary resources				
2. Which of the following is not a type of primary resource?				
a) Crude Oil b) Coal c) Hydrogen Energy d) Sunlight				
3. The ratio of energy received from a raw energy source to energy spent to obtain the raw				
energy source is called as				
a) consumption ratio b) fuel ratio c) energy yield ratio d) joule ratio				
4. Energy Resources which are being used for many decades are known as				
(a) conventional energy sources b) non-conventional energy sources				
c) primary energy sources d) fuel cells				
5. Which of the statements is correct about Solar Energy?				
a) It is a renewable and conventional source of energy				
b) It is a non-renewable and non-conventional source of energy Dr. G. Balakrishnan, M.E., Ph.D				
Principal  Indra Ganesan College of Engineering				
d) It is a non-renewable source of energy IG Valley, Madurai Main Road				
6. Wind and Hydrogen energy are examples of				
a) primary sources (b) primary and secondary sources respectively				
c) secondary sources d) tertiary sources				
7. On the basis of long-term availability, resources are classified into				
a) conventional and non-conventional resources				
(b) renewable and non-renewable resources				
c) primary and secondary resources				



8. Which of these resources does not produce CO2 during electricity generation?
a) Coal b) Methane c) Uranium (1) Biogas
9. On the basis of origin, energy resources are classified into natural and artificial resources.
a) True (b) False
10. Which of these is the major contributor to world pollution?
a) Commercial resources b) Non-Commercial Resources
d) Nuclear Energy
11. Half of the world's energy needs are fulfilled by renewable energy sources.
a) True (b) False
12. Which of the energy resources were considered for large scale use after the oil crisis of
1973?
a) Conventional Sources (b) Non-Conventional Sources
c) Non-renewable sources d) Primary Sources
13. The unit of energy yield ratio is
a) joule b) watt c) joule/Kelvin d) dimensionless
14. Which of the statements is correct about Solar Energy?
a) It is a renewable and conventional source of energy
b) It is a non-renewable and non-conventional source of energy  (c) It is a renewable and non-conventional source of energy
d) It is a non-renewable source of energy  Dr. G. Balakrishnan, M.E., Ph.I.
15. World Energy Needs are rising due to Indra Ganesan College of Engineering
a) deforestation (b) increasing population and Industrialization Manikandam, Trichy-620 012.
c) inflation d) natural calamities
16. Which of the following is a disadvantage of Hydro Power?
a) They cause deforestation and affect wildlife
b) They cause harmful emissions
c) They are an unstable source of energy
d) They are not suitable for long-distance electricity transmission



17. Which of the following statement is true about co	nventional energy sources?						
(a) hey cause minimum pollution	<u></u>						
b) They are available in limited quantity							
c) Coal is the most used conventional energy source in the world							
d) There are sufficient reserves of Coal, Petroleum and Natural gas for the next 300 year							
18. All of the conventional energy sources are Non-Renewable.							
a) True (b) False							
19. To focus on Renewable and Other alternative sour in March 1981 by the Government of India.	rces of energy, was established						
n) commission for additional sources of energy							
b) commission for alternative sources of energy							
c) council of scientific & industrial research							
d) centre for science and environment							
20. IREDA was developed by the Government of India	Jos and Charleston - Hallander Annie						
a) to implement more efficient methods for using Conventional Energy sources							
(b) to promote the Development of Non-Conventional Energy Sources							
c) to develop Nuclear Energy in India							
d) to control pollution							
21. Apart from supplying energy, fossil fuels are used f	or						
a) storing energy in solar ponds b) dr	ying Vegetables						
c) rotating turbine in Hydro Power plants	anufacture of Organic Chemicals						
22. The only country having a full-fledged ministry for Resources is	Development of New and Renewable						
(a) India b) Bangladesh c) USA	d) China						
23. Which of the following pollutants are emitted by the	burning of fossil fuel?						
(a) Exides of Carbon, Nitrogen, and Sulphur							
b) Oxides of Carbon, Uranium, and Radium	10.						
c) Calcium Halides and Oxides of Nitrogen	Do a						
d) Noble Gases	Dr. G. Balakrishnan, M.E., Ph.D.,  Principal Indra Ganesan College of Engineering IG Valley, Madurai Main Road Manikandam, Trichy-620 012.						
	~ ma						



# Indra Ganesan

COLLEGE OF ENGINEERING Madural Main Road (NH-45B), Manikandam, Trichy-12. Approved by AICTE, NewDelhi & Affiliated to Anna University, Chennai

sName of the Student: Amudha. M

Year/Sem: IV/VII)

AU Register Number: 811215105001

# Value Added Course

"Develop and Implementation of Renewable Energy systems using MATLAB"

MULTIPLE CHOICE QUESTIONS (25X1 = 25 Marks)

1. Based on usability, Energy Resources are classified into	
a) primary, secondary and tertiary resources	
b) primary and secondary resources	
c) primary, secondary, intermediate and tertiary resources	
d) primary, intermediate and secondary resources	
2. Which of the following is not a type of primary resource?	
a) Crude Oil b) Coal c) Hydrogen Energy d)	Sunlight
3. The ratio of energy received from a raw energy source to energy sp	pent to obtain the raw
energy source is called as	
a) consumption ratio b) fuel ratio c) energy yield ratio	d) joule ratio
4. Energy Resources which are being used for many decades are known	wn as
a) onventional energy sources b) non-conventional energy	sources
c) primary energy sources d) fuel cells	
5. Which of the statements is correct about Solar Energy?	
a) It is a renewable and conventional source of energy	(A.)
b) It is a non-renewable and non-conventional source of energy	1 Osp
c) It is a renewable and non-conventional source of energy	Dr. G. Balakrishnan, M.E., Ph.D
d) It is a non-renewable source of energy	Principal Indra Ganesan College of Engineering
6. Wind and Hydrogen energy are examples of	valley, Madurai Main Road
a) primary sources by primary and secondary sources re	Manikandam, Trichy-620 012. espectively
c) secondary sources d) tertiary sources	
7. On the basis of long-term availability, resources are classified into	
a) conventional and non-conventional resources	
b tenewable and non-renewable resources	
c) primary and secondary resources	
d) commercial and non-commercial resources	



8. Which of these resources does not produce CO2 during electricity generation?
a) Coal b) Methane c) Uranium d) Biogas
9. On the basis of origin, energy resources are classified into natural and artificial resources.
a) True b) False
10. Which of these is the major contributor to world pollution?
(a) Commercial resources b) Non-Commercial Resources
c) Renewable Resources d) Nuclear Energy
11. Half of the world's energy needs are fulfilled by renewable energy sources.
(a) True b) False
12. Which of the energy resources were considered for large scale use after the oil crisis of
1973?
a) Conventional Sources b) Non-Conventional Sources
c) Non-renewable sources d) Primary Sources
13. The unit of energy yield ratio is
a) joule b) watt c) joule/Kelvin d) timensionless
14. Which of the statements is correct about Solar Energy?
a) It is a renewable and conventional source of energy
b) It is a non-renewable and non-conventional source of energy
c) t is a renewable and non-conventional source of energy
d) It is a non-renewable source of energy  Dr. G. Balakrishnan, M.E., Ph.D
15. World Energy Needs are rising due to Indra Ganesan College of Engineering
a) deforestation b) increasing population and Industrialization Manikandam, Trichy-620 012.
c) inflation d) natural calamities
16. Which of the following is a disadvantage of Hydro Power?
hey cause deforestation and affect wildlife
b) They cause harmful emissions
c) They are an unstable source of energy

d) They are not suitable for long-distance electricity transmission



17. Which of the following statement is true about conventional energy sources?							
a) They cause minimum pollution							
b) They are available in limited quantity							
Co Coal is the most used conventional energy source in the world							
d) There are sufficient reserves of Coal, Petroleum and Natural gas for the next 300 years							
18. All of the conventional energy sources are Non-Renewable.							
a) True b) False							
19. To focus on Renewable and Other alternative sources of energy, was established in March 1981 by the Government of India.							
a) commission for additional sources of energy							
b) commission for alternative sources of energy							
c) council of scientific & industrial research							
d) centre for science and environment							
20. IREDA was developed by the Government of India							
a) to implement more efficient methods for using Conventional Energy sources							
b) to promote the Development of Non-Conventional Energy Sources							
c) to develop Nuclear Energy in India							
d) to control pollution							
21. Apart from supplying energy, fossil fuels are used for							
a) storing energy in solar ponds b) drying Vegetables							
c) rotating turbine in Hydro Power plants d) manufacture of Organic Chemicals							
22. The only country having a full-fledged ministry for Development of New and Renewable Resources is							
(a) India b) Bangladesh c) USA d) China							
23. Which of the following pollutants are emitted by the burning of fossil fuel?							
a) Oxides of Carbon, Nitrogen, and Sulphur							
b) Oxides of Carbon, Uranium, and Radium							
c) Calcium Halides and Oxides of Nitrogen							
d) Noble Gases  Dr. G. Balakrishnan, M.E., Ph.D.,  Principal							
• · · · · · · · · · · · · · · · · · · ·							



24.	is a petrochen	rical and is used	as raw mate	rial for chemical, pharmaceutical, and
	paint industry.			
	a) Plutonium	b) Uranium	C) Coal	d) Protactinium
25.	Which of the follow	ing statements i	s not true ab	out radioactive waste?
	a) It has radioacti	vity quotient of c	langerous lev	els.
	b) The disposed	radioactive waste	e is to be guar	ded for a long period
	et has low radi	oactivity quotien	nt	

d) Its radioactivity decreases with time.

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road

Manikandam, Trichy-620 012.

Name of the Student: P. KALISTA

Year/Sem: III/VI

AU Register Number: 811216105008

# Value Added Course

"Develop and Implementation of Renewable Energy systems using MATLAB" **MULTIPLE CHOICE QUESTIONS (25X1 = 25 Marks)** 

172 0 23 2 24 30 30 30 30 30 30 30 30 30 30 30 30 30					
1. Based on usability, Energy Resources are classified into					
a) primary, secondary and tertiary resources					
b) primary and secondary resources					
c) primary, secondary, intermediate and tertiary resources					
orimary, intermediate and secondary resources					
2. Which of the following is not a type of primary resource?					
a) Crude Oil b) Coal Hydrogen Energy d) Sunlight					
3. The ratio of energy received from a raw energy source to energy spent to obtain the raw					
energy source is called as					
a) consumption ratio b) fuel ratio (C) energy yield ratio d) joule ratio					
4. Energy Resources which are being used for many decades are known as					
a) conventional energy sources b non conventional energy sources					
c) primary energy sources d) fuel cells					
5. Which of the statements is correct about Solar Energy?					
a) It is a renewable and conventional source of energy					
b) It is a non-renewable and non-conventional source of energy					
(c) It is a renewable and non-conventional source of energy					
d) It is a non-renewable source of energy					
6. Wind and Hydrogen energy are examples of					
a) primary sources (b) primary and secondary sources respectively					
c) secondary sources d) tertiary sources					
Dr. G. Balakrishnan, M.E., Ph.D.,					
Principal  Indra Ganesan College of Engineering					
and a substitution of the					



and the state of t
7. On the basis of long-term availability, resources are classified into
a) conventional and non-conventional resources
renewable and non-renewable resources
c) primary and secondary resources
d) commercial and non-commercial resources
8. Which of these resources does not produce CO2 during electricity generation?
a) Coal (b) Methane c) Uranium d) Biogas
9. On the basis of origin, energy resources are classified into natural and artificial resources.
a) True (b) False
10. Which of these is the major contributor to world pollution?
Commercial resources b) Non-Commercial Resources
c) Renewable Resources d) Nuclear Energy
11. Half of the world's energy needs are fulfilled by renewable energy sources.
a) True (b) False
12. Which of the energy resources were considered for large scale use after the oil crisis of
1973?
a) Conventional Sources  Non-Conventional Sources
c) Non-renewable sources d) Primary Sources
13. The unit of energy yield ratio is
a) joule b) watt c) joule/Kelvin d) dimensionless
14. Which of the statements is correct about Solar Energy?
a) It is a renewable and conventional source of energy
b) It is a non-renewable and non-conventional source of energy
It is a renewable and non-conventional source of energy
d) It is a non-renewable source of energy
15. World Energy Needs are rising due to
a) deforestation b increasing population and Industrialization
c) inflation d) natural calamities
Dr. G. Balakrishnan, M.E., Ph.D.,
Index Company
andra transcan in the Engineering

woad. 12.



16. Which of the following is a disadvantage of Hydro Power?
They cause deforestation and affect wildlife
b) They cause harmful emissions
c) They are an unstable source of energy
d) They are not suitable for long-distance electricity transmission
17. Which of the following statement is true about conventional energy sources?
a) They cause minimum pollution
They are available in limited quantity
c) Coal is the most used conventional energy source in the world
d) There are sufficient reserves of Coal, Petroleum and Natural gas for the next 300 years
18. All of the conventional energy sources are Non-Renewable.
a) True BiFalse
19. To focus on Renewable and Other alternative sources of energy, was established in March 1981 by the Government of India.
(a) commission for additional sources of energy
b) commission for alternative sources of energy
c) council of scientific & industrial research
d) centre for science and environment
20. IREDA was developed by the Government of India
a) to implement more efficient methods for using Conventional Energy sources
promote the Development of Non-Conventional Energy Sources
c) to develop Nuclear Energy in India
d) to control pollution
21. Apart from supplying energy, fossil fuels are used for
a) storing energy in solar ponds b) drying Vegetables
c) rotating turbine in Hydro Power plants (d) manufacture of Organic Chemicals

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012.



COLLEGE OF ENGINEERING Madural Main Road (NH-45B), Manikandam, Trichy-12. Approved by AICTE, NewDelhi & Affiliated to Anna University, Chennai

22.	. The only coun	itry having a full-fledg	ed ministry 1	or Development of New	and Renewabl
	Resources is		,		and Kenewall
	a) India	b) Bangladesh	c) USA	d) China	
23.	Which of the f	following pollutants ar	e emitted by	the burning of fossil fue	1?
	a) Oxides o	of Carbon, Nitrogen, an	d Sulphur		
	(b)Oxides (	of Carbon, Uranium, an	d Radium 🗡	<	
		Halides and Oxides of			
	d) Noble C	rases			
24.	is a petro	ochemical and is used y.	as raw mater	ial for chemical, pharm	aceutical, and
	a) Plutoniu	m b) Uranium	Octal	d) Protactinium	
25.	Which of the f	ollowing statements is			
	a) It has rad	ioactivity quotient of da	angerous level	s.	
	b) The disp	osed radioactive waste	is to be guarde	ed for a long period	
	It has lov	w radioactivity quotient			
	d) Its radioa	ctivity decreases with ti	ime.		

Dr. G. Balakrishnan, M.E., Ph.D.,

Principal



# **Department of Electrical and Electronics Engineering**

Academic Year 2018-2019 - Even Semester

VALUE ADDED COURSE ASSESMENT SHEET

Develop and Implementation of Renewable Energy systems using MATLAB

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012.

S.NO	REG NO		YEAR/ BRANCH	Attendance Details		VAC-M	OVERALL	
		STUDENTS NAME		No. of Hours Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	MARK(100) (50% of A + 50% of B)
1	811215105001	AMUDHA. M	IV/EEE	30	100	20	80	90
2	811215105002	ANAND.V	IV/EEE	30	100	20	80	90
3	811215105003	BALACHANDRAN. M	IV/EEE	27	90	19	76	83
4	811215105004	BHUVANESWARI. A	IV/EEE	27	90	21	84	87
5	811215105005	DEEPA RAGAVI.M	IV/EEE	27	90	19	76	83
6	811215105006	FATHIMA SELVI. C	IV/EEE	27	90	19	76	83
7	811215105007	GAJALAKSHMI. B	IV/EEE	30	100	20	80	90
8	811215105008	GAYATHRI. R	IV/EEE	27	90	19	76	83
9	811215105009	GOMATHI. S	IV/EEE	27	90	19	76	83
10	811215105010	GOMATHY. M	IV/EEE	27	90	19	76	83
11	811215105011	GOPINATH. R	IV/EEE	30	100	21	84	92



# Indra Ganesan

COLLEGE OF ENGINEERING
Madural Main Road (NH-45B), Manikandam, Trichy-12.
Approved by AICTE, NewDelhi & Affiliated to Anna University, Chennai

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal
Indra Ganesan College of Engineering
Road
Manikandam, Trichy-620 012.

S.NO	REG NO	STUDENTS NAME	YEAR/ BRANCH	Attendance Details		VAC-M	OVERALL	
				No. of Hours Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	MARK(100) (50% of A + 50% of B)
12	811215105012	GUNASEELAN. M	IV/EEE	27	90	20	80	85
13	811215105013	JERALD FELIX, A	IV/EEE	30	100	21	84	92
14	811215105014	KEERTHANA. K	IV/EEE	30	100	19	76	88
15	811215105015	MANIKANDAN. M	IV/EEE	27	90	19	76	83
16	811215105016	MEENA. S	IV/EEE	24	80	20	80	80
17	811215105017	MEENAKSHI. P	IV/EEE	24	80	21	84	82
18	811215105018	MOHAMED ANSARI. A	IV/EEE	27	90	22	88	89
19	811215105019	MOHAMED IBRAHIM. A	IV/EEE	30	100	20	80	90
20	811215105020	NIVETHA. B	IV/EEE	27	90	21	84	87
21	811215105021	PRASANTH. R	IV/EEE_	24	80	20	80	80
22	811215105022	PRIYA. G	IV/EEE	27	90	21	84	87
23	811215105023	PRIYANKA. P	IV/EEE	30	100	20	80	90
24	811215105024	SATHEESWARI. P	IV/EEE	30	100	16	64	82
25	811215105025	SATHISHBABU. K	IV/EEE	30	100	19	76	88
26	811215105026	SATHIYAPRIYA. M	IV/EEE	30	100	21	84	92
27	811215105027	SELASTEENA RANI. J	IV/EEE	27	90	19	76	83
28	811215105028	SHALINI. M	IV/EEE	27	90	19	76	83
29	811215105029	SIVA RAMAN. M	IV/EEE	27	90	19	76	83
30	811215105030	SIVASAKTHI.A	IV/EEE	27	90	19	76	83



CCLLEGE OF ENGINEERING
Medural Main Road (NH-458), Manikandam, Trichy-12.
Approved by AICTE, NewDelhi & Affiliated to Anna University, Chennal

Dr. G. Balakrishnan, M.E., Ph.D.,

Principal

Indra Ganesan College of Engineering Walley, Madurai Main Read

Manikandam, Trichy-620 012.

S.NO	REG NO	STUDENTS NAME	YEAR/	Attenda	ince Details	VAC-M	OVERALL	
	REGNO		BRANCH	No. of Hours Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	MARK(100) (50% of A + 50% of B)
31	811215105031	SOPHIYA. T	IV/EEE	30	100	19	76	00
32	811215105032	SRI GAYATHRI. M	IV/EEE	27	90	19		88
33	811215105033	TAMILSELVI.M	IV/EEE	24	80	21	76	83
34	811215105034	VANITHA. R	IV/EEE	27	90		84	82
35	811215105035	VANITHA. S	IV/EEE	30		20	80	85
36	811215105036	VASUMATHI. V	IV/EEE	27	100	21	84	92
37	811215105037	VIGNESHWARAN. N	IV/EEE	30	90	19	76	83
38	811215105038	VIJAYALAKSHMI. R	IV/EEE	30	100	19	76	88
39	811215105039	VINOTH, S			100	19	76	88
40	811216105001	ATTCHAYA A K	IV/EEE	30	100	21	84	92
41	811216105003	BENAZIR M	III/EEE	27	90	21	84	87
42	811216105004	GUNA SEELAN D	III/EEE	24	80	20	80	80
43	811216105005	HARI GOWTHAM M	III/EEE	27	90	21	84	87
44	811216105006	HARIHARAN B	III/EEE	30	100	20	80	90
45	811216105007	ISWARYA K	III/EEE	27	90	19	76	83
46	811216105008	KALISTA P	III/EEE	30	100	19	76	88
47	811216105009	KHAJAMOINUDEEN S	III/EEE	30	100	21	84	92
48	811216105010	KIRUTHIKA B	III/EEE	27	90	19	76	83
49	811216105010	the extension of the same of t	III/EEE	24	80	20	80	80
77	011210103011	LOURDHU MARY D	III/EEE	24	80	20	80	80



Madural Main Road (NH-45B), Manikandam, Trichy-12.

Approved by AICTE, Newbelhi & Affiliated to Anna University, Chennal

Principal

- Principal

VT7mi arkeidikantiidinneye	REG NO	EG NO STUDENTS NAME		Attendance Details		VAC-M	OVERALL	
S.NO			YEAR/ BRANCH	No. of Hours Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	MARK(100) (50% of A + 50% of B)
50	811216105012	MARIA SHOBANA J	III/EEE	27	90	19	76	83
51	811216105014	MERLIN REETA P	ПІ/ЕЕЕ	30	100	20	80	90
52	811216105015	NIROSHINI R	III/EEE	27	90	19	76	83
53	811216105016	NITHING A	III/EEE	24	80	21	84	82
54	811216105017	PAVENTHAN A	III/EEE	27	90	20	80	85
55	811216105018	PRAVEEN KUMAR M	III/EEE	30	100	21	84	92
56	811216105019	PRISILLA PRIYANKA	III/EEE	27	90	20	80	85
57	811216105020	RAJA V	III/EEE	30	100	19	76	88
58	811216105021	RATHINA RAJ R	III/EEE	30	100	20	80	90
59	811216105023	RESHMI D	III/EEE	30	100	21	84	92
60	811216105024	ROOBINI S	III/EEE	27	90	21	84	87
61	811216105025	SURESH K	III/EEE	24	80	20	80	80
62	811216105026	SURIYA PRAKASH K	III/EEE	27	90	21	84	87
63	811216105027	TAMILARASAN M	III/EEE	30	100	20	80	90
64	811216105028	TAMILAZHAGAN M	III/EEE	27	90	19	76	83
65	811216105029	VINOTH R	III/EEE	30	100	19	76	88
66	811216105302	PARKAVI S	III/EEE	30	100	21	84	92
67	811217105005	ARUL JOY ASHA A	II/EEE	27	90	19	76	83
68	811217105006	ARUN SEBASTIN P	II/EEE	24	80	20	80	80



# Indra Ganesan

COLLEGE OF ENGINEERING
Madural Main Road (NH-45B), Manikandam, Trichy-12.
Approved by AICTE, NewDolh) & Affiliated to Anne University, Chennal

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal

S.NO		STUDENTS NAME	NATION A TIME	Attendance Details		VAC-MCQ TEST		OVERALL
	REG NO		YEAR/ BRANCH	77 6	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	MARK(100) (50% of A + 50% of B)
69	811217105007	BHARTHASARATHI M	II/EEE	24	80	21	84	82
70	811217105008	CHITHRA P	II/EEE	27	90	22	88	89
71	811217105009	DEEPIKA G	II/EEE	30	100	19	76	88
72	811217105010	EZHUMALAI A	II/EEE	27	90	19	76	83
73	811217105011	GAYATHRI K	II/EEE	24	80	21	84	82
74	811217105012	GAYATHRI S	II/EEE	27	90	20	80	85
75	811217105013	KANIMOZHI S	II/EEE	30	100	21	84	92
76	811217105014	KEERTHANA S	II/EEE	27	90	19	76	83
77	811217105015	KUMARIVALLI T	II/EEE	30	100	19	76	88
78	811217105016	MADHUMITHA S	II/EEE	30	100	20	80	90
79	811217105017	MANO K	II/EEE	30	100	21	84	92
80	811217105018	MEKALA M	II/EEE	27	90	21	84	87
81	811217105020	PAVITHRA S	II/EEE	24	80	20	80	80
82	811217105021	PRAVEEN RAJ R	II/EEE	27	90	21	84	87
83	811217105022	RAJASEKAR.N V	II/EEE	30	100	20	80	90
84	811217105023	REVATHI P	II/EEE	27	90	20	80	85
85	811217105024	RISHON GURU M	II/EEE	30	100	19	76	88
86	811217105026	SANTHOSH K	II/EEE	30	100	21	84	92
87	811217105027	SRIKUMAR M S	II/EEE	27	90	19	76	83



S.NO	REG NO	STUDENTS NAME	YEAR/ BRANCH	Attendance Details		VAC-M	OVERALL	
				No. of Hours Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	MARK(100) (50% of A + 50% of B)
88	811217105028	SRI LOGESH C	II/EEE	24	80			
89	811217105029	SUBHA T		produce plant c and		20	80	80
90	811217105031	The state of the s	II/EEE	24	80	21	84	82
N	And the same of the same same and the same same same same same same same sam	VALARMATHI C	II/EEE	27	90	22	88	89
91	811217105032	VISWANATH R	TT FINANCE	20	MIN 48 WA			07
92	811217105301		II/EEE	30	100	19	76	88
74	01121/103301	SANJEEV KUMAR R	II/EEE	27	90	19	76	83

VAC Coordinator

Gr. Malathi

HOD/EEE

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012.



### REPORT ON VALUE ADDED COURSE

Title:

"Develop and Implementation of Renewable Energy systems using MATLAB"

Resource Person:

Mr.G.Vijaya, Trainer, Micro win

Mr.K.Ranganathan, Trainer, Micro win

Automation, Tiruchirappalli-621216

To:

Automation, Tiruchirappalli-621216

Date of conduct from:

24.06.2019

28.06.2019

Duration: 30 Hours

Organized Department:

**Electrical and Electronics Engineering** 

Participant Year:

2,3,4

No. of Students Registered:

Venue:

Power System Simulation Lab

Outcome of Value Added Course (VAC): At the end of the Course, Students can be able to

- Understand the simulation tools in MATLAB/Simulink for solving Electrical Engineering problems related to renewable energy.
- Recognize various tool boxes used for renewable energy application development.
- Examine the methods for Troubleshooting in various simulation tools.
- Gain knowledge about working principle of various solar energy systems.
- Implement and verify control strategies in the simulation platform for renewable energy applications.

### Assessment Process

- Students, who are securing more than 70% on total score and secured more than 75% in attendance is eligible to receive the certificate for the VAC course conducted
- Total Score = (0.5 \*Attendance in VAC out of 100 percentage + 0.5 \*Test mark in VAC out of 100 marks)

Sy Ma lathi HOD/EEE

Dr. G. Balakrishnan, M.E., Ph.D.,

Principal



### SAMPLE PHOTOS OF VALUE ADDED COURSE

Title:

"Develop and Implementation of Renewable Energy systems using MATLAB"

Resource Person:

Mr.G. Vijaya, Trainer, Micro win

Automation, Tiruchirappalli-

Automation, Tiruchirappalli-621216

Date of conduct from:

24,06,2019

Duration: 28.06.2019

30 Hours

Organized Department:

Electrical and Electronics Engineering

Participant Year:

2,3,4

621216

No. of Students Registered:

Mr.K.Ranganathan, Trainer, Micro win

Venue: Power System Simulation Lab

### Sample Photos





VAC Coordinator

Gr. Ma lathi

HoD/EEE

Dr. G. Balakrishnan, M.E., Ph.D.,

Principal





This is to certify that Mr. SIVA RAMAN. M, IV Year, EEE has successfully completed the Value Added Course on "Develop and Implementation of Renewable Energy systems using MATLAB" organized by Department of Electrical & Electronics Engineering of our Institution in Association with Micro win Automation from 24<sup>th</sup> June 2019 to 28<sup>th</sup> June 2019 (5days) during the Academic year 2018-2019.

rajasekaran r

Micro win Automation Mr.R.Rajasekaran Chief Executive Officer. 2Gf

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal

Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012.





This is to certify that Mr. ANAND.V, IV Year, EEE has successfully completed the Value Added Course on "Develop and Implementation of Renewable Energy systems using MATLAB" organized by Department of Electrical & Electronics Engineering of our Institution in Association with Micro win Automation from 24th June 2019 to 28th June 2019 (5days) during the Academic year 2018-2019.

rajasekaran r

Mr.R.Rajasekaran

Chief Executive Officer.

Dr. G. Balakrishnan, M.E., Ph.D.,

Principal

Indra Ganesan College of Engineering IG Valley, Madurai Main Road Manikandam, Trichy-620 012.

**Principal** 





This is to certify that Ms. FATHIMA SELVI. C, IV Year, EEE has successfully completed the Value Added Course on "Develop and Implementation of Renewable Energy systems using MATLAB" organized by Department of Electrical & Electronics Engineering of our Institution in Association with Micro win Automation from 24<sup>th</sup> June 2019 to 28<sup>th</sup> June 2019 (5days) during the Academic year 2018-2019.

rajasekaran r

Micro win Automation

Mr.R.Rajasekaran

Chief Executive Officer.

SCH-

Dr. G. Balakrishnan, M.E., Ph.D.,

Principal
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012.





This is to certify that Ms. GOMATHY. M., IV Year, EEE has successfully completed the Value Added Course on "Develop and Implementation of Renewable Energy systems using MATLAB" organized by Department of Electrical & Electronics Engineering of our Institution in Association with Micro win Automation from 24<sup>th</sup> June 2019 to 28<sup>th</sup> June 2019 (5days) during the Academic year 2018-2019.

rajasekaran r

Micro win Automation

Mr.R.Rajasekaran

Chief Executive Officer.

act.

Dr. G. Balakrishnan, M.E., Ph.D.,

Indra Ganesan College of Engineering IG Valley, Madurai Main Road Manikandam, Trichy-620 012. Principal





This is to certify that Mr. JERALD FELIX. A., IV Year, EEE has successfully completed the Value Added Course on "Develop and Implementation of Renewable Energy systems using MATLAB" organized by Department of Electrical & Electronics Engineering of our Institution in Association with Micro win Automation from 24<sup>th</sup> June 2019 to 28<sup>th</sup> June 2019 (5days) during the Academic year 2018-2019.

rajasekaran r

Micro win Automation

Mr.R.Rajasekaran

Chief Executive Officer.

3ch

Dr. G. Balakrishnan, M.E., Ph.D.,

Principal

Indra Ganesan College of Engineering IG Valley, Madurai Main Road Manikandam, Trichy-620 012. Principal





This is to certify that Mr. VIGNESHWARAN. N, IV Year, EEE has successfully completed the Value Added Course on "Develop and Implementation of Renewable Energy systems using MATLAB" organized by Department of Electrical & Electronics Engineering of our Institution in Association with Micro win Automation from 24<sup>th</sup> June 2019 to 28<sup>th</sup> June 2019 (5days) during the Academic year 2018-2019.

rajasekaran r

Micro win Automation

Mr.R.Rajasekaran

Chief Executive Officer.

3ch

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal

Indra Ganesan College of Engineering IG Valley, Madurai Main Road Manikandam, Trichy-620 012. Principal





This is to certify that Ms. KALISTA P, III Year, EEE has successfully completed the Value Added Course on "Develop and Implementation of Renewable Energy systems using MATLAB" organized by Department of Electrical & Electronics Engineering of our Institution in Association with Micro win Automation from 24th June 2019 to 28th June 2019 (5days) during the Academic year 2018-2019.

rajasekaran r Micro win Automation

Mr.R.Rajasekaran

Chief Executive Officer.

**Principal** 

**IGCE** 

Dr. G. Balakrishnan, M.E., Ph.D., Principal Indra Ganesan College of Engineering IG Valley, Madurai Main Road

Manikandam, Trichy-620 012.





This is to certify that Mr. KHAJAMOINUDEEN S, III Year, EEE has successfully completed the Value Added Course on "Develop and Implementation of Renewable Energy systems using MATLAB" organized by Department of Electrical & Electronics Engineering of our Institution in Association with Micro win Automation from 24th June 2019 to 28th June 2019 (5days) during the Academic year 2018-2019.

rajasekaran r

Micro win Automation

Mr.R.Rajasekaran

Chief Executive Officer.

ECH.

Principal

**IGCE** 

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal
Indra Ganesan College of Engineering

IG Valley, Madurai Main Road Manikandam, Trichy-620 012.





This is to certify that Ms. MARIA SHOBANA J, III Year, EEE has successfully completed the Value Added Course on "Develop and Implementation of Renewable Energy systems using MATLAB" organized by Department of Electrical & Electronics Engineering of our Institution in Association with Micro win Automation from 24<sup>th</sup> June 2019 to 28<sup>th</sup> June 2019 (5days) during the Academic year 2018-2019.

rajasekaran r

Micro win Automation

Mr.R.Rajasekaran

Chief Executive Officer.

ECH.

Principal

**IGCE** 

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012.





This is to certify that Mr. RATHINA RAJ R, III Year, EEE has successfully completed the Value Added Course on "Develop and Implementation of Renewable Energy systems using MATLAB" organized by Department of Electrical & Electronics Engineering of our Institution in Association with Micro win Automation from 24<sup>th</sup> June 2019 to 28<sup>th</sup> June 2019 (5days) during the Academic year 2018-2019.

rajasekaran r

Micro win Automation

Mr.R.Rajasekaran

Chief Executive Officer.

and the second second

Principal

**IGCE** 

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal





This is to certify that Ms. ROOBINI S, III Year, EEE has successfully completed the Value Added Course on "Develop and Implementation of Renewable Energy systems using MATLAB" organized by Department of Electrical & Electronics Engineering of our Institution in Association with Micro win Automation from 24<sup>th</sup> June 2019 to 28<sup>th</sup> June 2019 (5days) during the Academic year 2018-2019.

rajasekaran r

Micro win Automation

Mr.R.Rajasekaran

Chief Executive Officer.

- Carly and

Principal IGCE

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal





This is to certify that Mr. TAMILAZHAGAN M, III Year, EEE has successfully completed the Value Added Course on "Develop and Implementation of Renewable Energy systems using MATLAB" organized by Department of Electrical & Electronics Engineering of our Institution in Association with Micro win Automation from 24<sup>th</sup> June 2019 to 28<sup>th</sup> June 2019 (5days) during the Academic year 2018-2019.

rajasekaran r Micro win Automation Mr.R.Rajasekaran

Chief Executive Officer.

Principal

**IGCE** 

Dr. G. Balakfishnan, M.E., Ph.D.,





This is to certify that Mr. EZHUMALAI A, II Year, EEE has successfully completed the Value Added Course on "Develop and Implementation of Renewable Energy systems using MATLAB" organized by Department of Electrical & Electronics Engineering of our Institution in Association with Micro win Automation from 24<sup>th</sup> June 2019 to 28<sup>th</sup> June 2019 (5days) during the Academic year 2018-2019.

rajasekaran r

Micro win Automation Mr.R.Rajasekaran Chief Executive Officer.

Dr. G. Balakrishnan, M.E., Ph.D.,

Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012.

Principal





This is to certify that Mr. ARUL JOY ASHA A, II Year, EEE has successfully completed the Value Added Course on "Develop and Implementation of Renewable Energy systems using MATLAB" organized by Department of Electrical & Electronics Engineering of our Institution in Association with Micro win Automation from 24<sup>th</sup> June 2019 to 28<sup>th</sup> June 2019 (5days) during the Academic year 2018-2019.

vajasekaran r

Micro win Automation Mr.R.Rajasekaran Chief Executive Officer. ECH.

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012.





This is to certify that Mr. BHARTHASARATHI M, II Year, EEE has successfully completed the Value Added Course on "Develop and Implementation of Renewable Energy systems using MATLAB" organized by Department of Electrical & Electronics Engineering of our Institution in Association with Micro win Automation from 24<sup>th</sup> June 2019 to 28<sup>th</sup> June 2019 (5days) during the Academic year 2018-2019.

vajasekaran r

Micro win Automation Mr.R.Rajasekaran Chief Executive Officer.

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal

Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012.





This is to certify that Ms. KANIMOZHI S, II Year, EEE has successfully completed the Value Added Course on "Develop and Implementation of Renewable Energy systems using MATLAB" organized by Department of Electrical & Electronics Engineering of our Institution in Association with Micro win Automation from 24<sup>th</sup> June 2019 to 28<sup>th</sup> June 2019 (5days) during the Academic year 2018-2019.

rajasekaran r

Micro win Automation Mr.R.Rajasekaran Chief Executive Officer. 2 Caffein

Dr. G. Balakrishnan, M.E., Ph.D.,

Principal
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012.





This is to certify that Mr. PRAVEEN RAJ R, II Year, EEE has successfully completed the Value Added Course on "Develop and Implementation of Renewable Energy systems using MATLAB" organized by Department of Electrical & Electronics Engineering of our Institution in Association with Micro win Automation from 24th June 2019 to 28th June 2019 (5days) during the Academic year 2018-2019.

rajasekaran r

Micro win Automation Mr.R.Rajasekaran Chief Executive Officer.

Dr. G. Balakrishnan, M.E., Ph.D., Principal Indra Ganesan College of Engineering

IG Valley, Madurai Main Road Manikandam, Trichy-620 012.





This is to certify that Mr. SANJEEV KUMAR R, II Year, EEE has successfully completed the Value Added Course on "Develop and Implementation of Renewable Energy systems using MATLAB" organized by Department of Electrical & Electronics Engineering of our Institution in Association with Micro win Automation from 24<sup>th</sup> June 2019 to 28<sup>th</sup> June 2019 (5days) during the Academic year 2018-2019.

rajasekaran r

Micro win Automation Mr.R.Rajasekaran Chief Executive Officer. ECH.

Principal

**IGCE** 

Dr. G. Balakrishnan, M.E., Ph.D.,