

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 2020-2021 / ODD 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:	IoT-R	aspbe	erry Pi							
Resource Per	rson:	DES	JRESH, IGN ENGINE SAI SOFTWA							
Date of cond	uct fro	m:	08.02.2021		To:	12.02.2021		Duration:	30 Hours	
Organized D	epartm	ent:	ELECTRIC	AL A	ND EI	LECTRINIC	E EN	GINEERIN	G	
Participant \	Year:	EEE	- IV, III, II	Sem	ester:	ODD	No.	of Students 1	Registered:	44
Venue: G	OOGL	Е МЕ	ET							

Table of Content

S. No	Document	Page No
1.	VAC Circular	3-3
2.	VAC Schedule	4-4
3.	List of the Students Participation	5-6
4.	Attendance Of Students	7-9
5.	VAC Test Paper	10-12
6.	VAC Answer Key	13-13
7.	VAC Test Answer Sheet- Sample	14-16
8.	VAC Mark Statement	17-19
9.	VAC Report	20-21
10.	Course Completion Certificates	22-39



Department of Electrical and Electronics Engineering Academic Year 2020-2021 -Odd Semester

04.02.2021

DEPARTMENT CIRCULAR

Department of Electrical and Electronics Engineering and IQAC of IGCE in association with Sri Sai Software is going to organize Value Added Course for all Second ,Third and Final year students on "IoT-Raspberry Pi" from 08.02.2021 to 12.02.2021. Certificates will be issued to the eligible participants at the end of the Course. This training will be conducted through online mode.

Resource Person Detail	1. M.Suresh, Design Engineer, Sri Sai Software.
Online Mode	Google Meet

Gr. Ma latter HOD/EEE PMd: pal

Cc:

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

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

Indra Ganesan College of Engineering
IG Valley, Madurai Main Road

Manikandam, Trichy-620 012.



Value Added Course

"IoT-Raspberry Pi"

SYLLABUS

	TOPIC COVERED	DURATION (in hours)	DATE
S.NO	TORIC COVERED	3	08.02.2021
1	Introduction to IoT	3	08.02.2021
2	Basics of Networking, Communication Protocols	3	09.02.2021
3	Sensor Networks	3	09.02.2021
4	Machine-to-Machine Communications L.T. Introduction to Arduino	3	10.02.2021
5	Interoperability in IoT, Introduction to Arduino Programming Integration of Sensors and Actuators with Arduino	3	10.02.2021
6	Introduction to Python programming, Introduction to Raspberry Pi, Implementation of IoT with	3	11.02.2021
7	Raspberry Pi		11.02.202
8	SDN for IoT (contd), Data Handling and Analytics, Cloud Computing	3	12.02.202
9	Fog Computing, Smart Cities and Smart Homes Fog Computing, Smart Cities and Smart Homes	* * * * * * * * * * * * * * * * * * *	10.00.000
10	Connected Vehicles, Smart Grid, Industrial IoT, Industrial IoT (contd), Case Study: Agriculture, Healthcare, Activity Monitor	3	12.02.202
	Heaturcate, Activity	1	12.02.202
11	Exam Total Hours (Excluding Test	30	

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

Principal

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

Gr. Ma lathi HOD/EEE

VAC Coordinator



Value Added Course

STUDENTS PARTICIPATION LIST

"IoT-Raspberry Pi"

s.no	Register Number	Student Name	YEAR/ BRANCH
-	811217105005	ARUL JOY ASHA A	IV/EEE
1	811217105005	ARUN SEBASTIN P	IV/EEE
2	811217105007	BHARTHASARATHI M	IV/EEE
3	811217105007	CHITHRA P	IV/EEE
4	811217105009	DEEPIKA G	IV/EEE
5	811217105009	EZHUMALAI A	IV/EEE
6	The second secon	GAYATHRI K	IV/EEE
7	811217105011 811217105012	GAYATHRI S	IV/EEE
8	811217105012	KANIMOZHI S	IV/EEE
9	811217105013	KEERTHANA S	IV/EEE
10	811217105014	KUMARIVALLI T	IV/EEE
11		MADHUMITHA S	IV/EEE
12	811217105016	MANO K	IV/EEE
13	811217105017	MEKALA M	IV/EEE
14	811217105018	PAVITHRA S	IV/EEE
15	811217105020	PRAVEEN RAJ R	IV/EEE
16	811217105021	RAJASEKAR.N V	IV/EEE
17	811217105022	REVATHI P	IV/EEE
18	811217105023	RISHON GURU M	IV/EEE
_ 19	811217105024	SANTHOSH K	IV/EEE
20	811217105026	SRIKUMAR M S	IV/EEE
21	811217105027	SRI LOGESH C	IV/EEE
22	811217105028	SUBHA T	IV/EEE
23	811217105029	VALARMATHI C	IV/EEE
24	811217105031	VALARMATH C VISWANATH R	IV/EEE
25	811217105032		IV/EEE
26	811217105301	SANJEEV KUMAR R	
27	811218105001	ARUN PRAVEEN RAJ A	III/EEE
28	811218105002	HARIHARAN M	III/EEE
29	811218105003	INBARAJ A	III/EEE
30	811218105004	JEYA STEPHEN S	III/LDL

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

Principal

Indra Ganesan College of Engineering
IG Valley, Madurai Main Road



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

s.no	Register Number	Student Name	Year/ Branch
31	811218105005	MANIKANDAN N	III/EEE
32	811218105006	PADMANABAN A	III/EEE
33	811218105007	SASIKUMAR R	III/EEE
34	811218105008	SIVAKUMAR P	III/EEE
35 35	811218105009	VEERA RAGAVAN A	III/EEE
36	811218105010	YUVARAJ S	III/EEE
37	811219105001	ARULRAJ .A	II/EEE
38	811219105002	BARATH M.M	II/EEE
-	811219105003	MANIKANDAN A	II/EEE
39	811219105004	MANIKANDAN K	II/EEE
40	811219105005	PONNALAGU C	II/EEE
41	811219105006	SALAMON A	II/EEE
42	811219105007	SARAVANAKUMAR M	II/EEE
43	811219105008	SOLAIMATHI .K	II/EEE
44	811219105701	DHEVENTHIRAN .P	II/EEE
45	813919105301	VENKATRAMAN.A	II/EEE

Gr. Ma Cuthe

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

Principal



Indra Ganesan

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

Department of Electrical and Electronics Engineering

Academic Year 2020-2021 - Odd Semester

STUDENTS ATTENDANCE LIST

Value Added Course

"IoT-Raspberry Pi"

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

-		A CONTRACTOR OF THE PROPERTY O		08.02	2021		.2021	10.02	.2021	11.02	.2021	12.02	.2021	NO OF	SIGNATURE
s.no	Register	Name	YEAR/ BRANCH	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	SESSIONS ATTENDED	OF THE STUDENT
	Number					P	P	P	Р	P	P	P	P	10	
1	811217105005	ARUL JOY ASHA A	IV/EEE	P	P		*****	p	P	p	P	Р	P	10	
2	811217105006	ARUN SEBASTIN P	IV/EEE	P	P	<u>.</u> P	P	-		P	A	P	P	9	-
3	811217105007	BHARTHASARATHI M	IV/EEE	P	P	P	P	P	P	1 -	1	P	P	9	
	811217105008	CHITHRA P	IV/EEE	P	P	P	P	P	A	P	P			9	
4	811217105009	DEEPIKA G	IV/EEE	P	P	P	P	A	P	P	P	P	P	9	ONLINE
5	-4140 121	EZHUMALAI A	IV/EEE	P	P	P	P	P	P	P	A	P	P		
6	811217105010	ATTENDED TO SECURE ASSESSMENT AND ASSESSMENT ASSESSMENT ASSESSMENT AND ASSESSMENT ASSESSME	IV/EEE	P	P	P	P	P	P	P	P	P	P	10	
7	811217105011	GAYATHRI K	IV/EEE	P	P	P	P	P	A	P	P	P	P	9	_
8	811217105012	GAYATHRI S		P	P	P	P	P	P	P	A	P	P	9	
9	811217105013	KANIMOZHI S	IV/EEE			P	P	A	P	P	P	P	P	9	1
10	811217105014	KEERTHANA S	IV/EEE	P	P	** * * * ********		$+\frac{A}{P}$	P	P	P	Р	P	10	
11	811217105015	KUMARIVALLI T	IV/EEE	P	P	P	P		P	P	P	P	р	9	
12	811217105016	MADHUMITHA S	IV/EEE	P	_ P_	P	A	P		P	P	P	P	10	
13	811217105017	MANAGEMENT MAN JOHNS MANAGEMENT MAN AND AND AND AND AND AND AND AND AND A	IV/EEE	P	P	P	P	P	P		-	P	P	10	
14	811217105018		IV/EEE	P	P	P	P	P	P	P	P	F	1 1		Wanter and the Manager of

Indra Ganesan

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

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

,	The state of the s	- water-spec made strong specifications are a ser as deal see		08.02	.2021	09.02	.2021	10.02	.2021	11.02	2.2021	12.02	2.2021	NO OF	SIGNATURE
s.no	Register Number	Name	YEAR/ BRANCH	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	SESSIONS ATTENDED	OF THE STUDENT
15	811217105020	PAVITHRA S	IV/EEE	P	P	P	P	P	A	P	P	P	P	9	
16	811217105021	PRAVEEN RAJ R	IV/EEE	P	P	A	P	A	P	P	P	P	P	8	
17	811217105022	RAJASEKAR.N V	IV/EEE	P	P	P	A	P	P	P	A	P	P	8	
18	811217105023	REVATHI P	IV/EEE	P	P	P	P	P	A	P	P	P	P	9	
19	811217105024	RISHON GURU M	IV/EEE	P	P	P	P	P	P	P	P	P	P	10	
20	811217105026	SANTHOSH K	IV/EEE	P	P	P	P	P	P	P	A	P	P	9	
21	811217105027	SRIKUMAR M S	IV/EEE	P	P	P	P	P	A	P	A	P	P	8	
22	811217105028	SRI LOGESH C	IV/EEE	P	P	P	A	P	P	P	P	P	P	9	-
23	811217105029	SUBHA T	IV/EEE	P	P	P	P	P	P	P	P	P	P	10	increased.
24	811217105031	VALARMATHI C	IV/EEE	P	P	P	P	P	P	P	P	P	P	10	ONLINE
25	811217105032	VISWANATH R	IV/EEE	P	P	P	P	P	P	P	P	P	P	10	
26	811217105301	SANJEEV KUMAR R	IV/EEE	P	P	P	P	P	P	P	P	P	P	10	
27	811218105001	ARUN PRAVEEN RAJ A	III/EEE	P	P	P	P	P	P	P	A	P	P	9	
28	811218105002	HARIHARAN M	III/EEE	P	P	P	P	P	A	P	P	P	P	9	
29	811218105003	INBARAJ A	III/EEE	P	P	P	A	P	P	P	P	P	P	9	
30	811218105004	JEYA STEPHEN S	III/EEE	P	P	P	P	A	P	P	P	P	P	9	
31	811218105005	Committee of the Commit	III/EEE	P	P	P	P	P	P	P	P	P	P	10	
32	811218105006	SAME STREET, STATE OF THE PROPERTY OF THE PROP	III/EEE	P	P	P	A	P	P	P	P	P	P	9	
33	811218105007	SASIKUMAR R	III/EEE	P	A	P	P	P	A	P	P	P	P	8	
34	811218105008	S SIVAKUMAR P	III/EEE	P	P	P	P	P	P	P	A	P	P	9	***
35	811218105009	Applications and the state of t	III/EEE	P	P	P	P	P	P	P	P	P	P	10	



COLLEGE OF ENGINEERING

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

	Register	Tanada and an analysis of disperse damage.	YEAR/	08.02	2.2021	09.02	2.2021	10.02	2.2021	11.02	2.2021	12.02	2.2021	NO OF	SIGNATURE
S.NO	Number	Name	BRANCH	FN	AN	SESSIONS ATTENDED	OF THE STUDENT								
36	811218105010	YUVARAJ S	III/EEE	P	P	P	P	P	P	P	A	P	P	9	
37	811219105001	ARULRAJ .A	II/EEE	P	P	P	P	P	P	P	P	P	P	10	
38	811219105002	BARATH M.M	II/EEE	P	P	P	P	P	P	P	P	P	P	10	4
39	811219105003	MANIKANDAN A	II/EEE	P	P	P	P	P	P	P	P	P	P	10	gga in a said
40	811219105004	MANIKANDAN K	II/EEE	P	P	P	P	P	A	P	P	P	P	9	0111115
41	811219105005	PONNALAGU C	II/EEE	P	P	A	P	P	P	P	A	P	P	8	ONLINE
42	811219105006	SALAMON A	II/EEE	P	P	P	P	P	A	P	P	P	P	9	
43	811219105007	SARAVANAKUMAR M	II/EEE	P	P	P	P	P	P	P	P	P	P	10	
- 44	811219105008	SOLAIMATHI .K	II/EEE	P	P	P	P	P	P	P	A	P	P	9	
45	811219105701	DHEVENTHIRAN .P	II/EEE	P	P	P	P	P	A	P	P	P	P	9	
46	813919105301	VENKATRAMAN.A	II/EEE	P	P	A	P	P	P	P	A	P	P	8	

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

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

Gr. Ma lathi

HoD/EEE



Name of the Student:

Year/Sem:

AU Register Number:

Value Added Course

"IoT-Raspberry Pi"

MULTIPLE CHOICE QUESTIONS (25X1 = 25 Marks)

1. The Raspberry	Pi is defined as the	make the second		
a) Micro C	omputer b) Meg	ga Computer	c) Minicomputer	d) Nano Computer
2. Raspbian is	anggapatan aman musaa waana ay waanta ay			
	ler b) Language		d) OS	
3. Raspherry Pi c	onsists of a	quad-core pro	essor or microp	rocessor.
a) 16-bit	b) 32-bit	c) 64-bit	d) 128-bit	
4. The Raspberry communication	Pi has a	interface to a	llow it to perforn	ı serial data
a) UART	b) GPIO	c) I2C	d) SPI	
5. How many USI	3 ports are present	in Raspberry P	i 3?	
a) 5 b)	2 c) 4 d) 3			
6. What bit proce	ssor is used in Pi 3	?		
a) 64-bit	b) 32-bit	c) 128-bit	d) Both 64 and	32 bit
7. What is the spe	eed of operation in	Pi 3?		l
a) 900MF		c) 1GHz	d) 500MHz	()
8. What is the Et	hernet/LAN cable	used in RPi?		Dr. G. Balakrishnan, M.E., Ph.D.,
a) Cat5	b) Cat5e	c) Cat6	d) RJ45	Principal Indra Ganesan Gall
9. How many In	out/output pins on l	board Raspberr	y Pi3 has?	Indra Ganesan College of Engineering IG Valley, Madurai Main Road Manikandan
a) 20	b) 30	c) 40	d) 50	Manikandam, Trichy-620 012.
10. How much R	AM, the Raspberr	y Pi has?		
a) 2GiB (GiB of RAM	c) 4GiB of RA	M d) 8GiB of RAM



AND DESCRIPTION OF THE PROPERTY OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO I			
11. What is the maximum perip	heral current draw	allowed in Raspbe	erry Pi 3?
	o) 700 mA	c) 500 mA	d) 100 mA
12. What does GPIO stand for?	1		
a) General Purpose Inner			ose Input Output Pins
c) Generally Powered In	out Output Pins	d) General Purp	ose Input Output Processor
13. What do we use to connect	TV to RPi?		
a) Male HDMI	b) Female H	DMI	
c) Male HDMI and Adap	oter d) Female H	DMI and Adapter	
14. Data collected by Raspherr	y Pi from the senso	r can be	
a) Processed in Raspber		her devices connect	ed to the network
c) Used to control/activa	nte other devices in th	ne network d) All (of the above
15. Which operating system R	aspberry Pi has?		
a) Linux		let BSD d) All o	of the above
6. How power supply is done t	o RPi?		
a) USB connection	b) Internal battery	c) Charger	d) Adapter
17. What are the mode(s) used	l for addressing the	pins in Raspberry	Pi?
a) GPI b) BCM			O, BCIM & CAN
18. What are the parameters	that are default valu	ies?	
a) Port Name and Bits	b) Speed ar	d Port Names	
c) Speed and Parity	d) Stop bit	and Flow Control	
19. The BCM 14 pin of Raspl	erry Pi is		
a) Physical pin 8	b) UART	Dr. G. F	Balakrishnan, M.E., Ph.D., Principal
c) Transmitter pin	d) All of the above	Indra Ga	nesan College of Engineering alley, Madurai Main Road
20. What is the command us	ed for easy using of	GNU screen? Man	ikandanı, Trichy-620 012.
a) \$user add -G {dial o			t_Name115200

c) Minicom -b 115200 -o -D Port Name

d) Prompt> # help

21. The Raspberry Pi is defined as the?

- a) Minicomputer
- b) Micro Computer
- c) Mega Computer
- d) Nano Computer

22. Which instruction set architecture is used in Raspberry Pi?

- a) X86
- b) MSP
- c) AVR
- d) ARM

23. Which instruction set is used in Raspberry Pi?

- a) CISC
- b) RISC
- c) MIPS
- d) None of these mentioned

24. Which of the following variants of Raspberry Pi has an inbuilt wi-fi?

- a) Raspberry Pi 2
- b) Raspberry Pi 3
- c) Raspberry Pi A+
- d) Raspberry Pi Zero

25. Which of the following is a not type of Raspberry Pi?

- a) Raspberry Pi Alternatives
- b) Raspberry Pi Zero W
- c) Raspberry Pi 3 Model B+
- d) Raspberry Pi 3 Model A+

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

Principal



Value Added Course

"IoT-Raspberry Pi"

ANSWER KEY

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

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

Principal

1212121

ARULRASIA 811219105001 Ilya (II sem

1. () Wentumputer

2. d) as

3, c) by - bet

4. b) GPE

5. C) W

6- a) 64-684

7. b) 1.201 tz

8. d) RJ48

9. 2) 50

10. b) 161 18 06 RAM

(1. a) 1209 Ma

12 b) be eres al spropose input output pin

13. C) Have HOMI and Adapter

(H. b) sont to other porties computed to the notinestic

15. d) All of above

16. a) USB connection

IT () Board & BLAG

18 b) speed and Rout Name

19 () Transmitte polo

201 B) & seen post - Name MESSOO.

21. b) Hini compacted

22, d) RAM

28 . C) MIRS

all c) Rosphorous Brot

25. d) Roupberry P: anddel A+

(25)

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

12.2.21

WOOTA Ragaran A
81121810 5009

ITT year EEE (5 sin

1) c) Minicompleter

2) d) 03/

- (3) b) 32-bit
 - 4) a) WART
 - 5) c) 41
 - 6) a) 64 bit
 - 7) c) 1040
 - 8) d) R345
 - 9) () 40
 - 10) 6) 1618 8 8AM
 - 11) a) 1200 MA
 - (2) a) General purpose uner outer propeller
 - 13) c) Male Homi and Apopter
 - 4) d) All of the About
 - 15) d) All of the About
- .16) b) internal battley
 - (4) () Board & Boot
- 18) b) speed and porte somes
- 19) d) All of the above
- 20) b) screen port_ work 15200
- is) of Minicompleter
- 22) d) A Amy
- 23) c) mups
- 24) b) Rasborny RY3
- 25) d) Rasborry pizerodal A+

(25)

0

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

	ToT-Raspbany	Name Kanthana S
		Reg No 8112171 050
		Your Isam: IV Ya 107.
1.0	Mini computes	
2 d	08/	(19)
-3.C	64-64	
4.6	GPTOX	125/
	4.	
b. a	69-bit	
7.6	12 Gotto	
	RJUS	
	80/	
10.b	1918 of ROM	
	. 1200 Ma	
	General purpose Input output	A. A.
12 16		
13 C	Male Henry and Adaptos	
14.6	. Sent to other devices co	nouted to the retro
15 0	All of the above	
16 9	USB constion	110.7
11.c	BodRD & Boom	Dr. G. Balakrishnan, M.E.,
18. b	Speed and part Name.	Principal Indra Ganesan College of Engine
19.0	Transmilton pio	IG Valley, Madurai Main Roa Manikandam, Trichy-620 01



Indra Ganesan BULLEBE OF ENGINEERING Madural 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
IG Valley, Madural Main Road

Banikandam, Trichy-420 012.

Department of Electrical and Electronics Engineering

Academic Year 2020-2021 - Odd Semester

VALUE ADDED COURSE ASSESMENT SHEET

"IoT-Raspberry Pi"

		Name	YEAR/ BRANCH	Attenda	nce Details	VAC-MCQ TEST		OVERALL
3.10	Register Number			No. of Hours Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	MARK (100) (50% of A + 50% of B)
2	811217105005	ARUL JOY ASHA A	IV/EEE	30	100	20	80	90
	811217105006	ARUN SEBASTIN P	IV/EEE	30	100	19	76	a street regard years
3	811217105007	BHARTHASARATHI M	IV/EEE	27	90	20	80	88
4	811217105008	CHITHRA P	IV/EEE	27	90	21	**************************************	85
5	811217105009	DEEPIKA G	IV/EEE	27	90	100 400	84	87
6	811217105010	EZHUMALAI A	IV/EEE	27		20	80	85
7	811217105011	GAYATHRI K	IV/EEE	10mmman 4 70	90	19	76	83
8	811217105012	GAYATHRI S	IV/EEE	30	100	20	80	90
9	811217105013	KANIMOZHI S	- see worker we . where -	27	90	20	80	85
10	811217105014	KEERTHANA S	IV/EEE	27	90	19	76	83
11	811217105015	KUMARIVALLI T	IV/EEE	27	90	19	76	83
12	811217105016		IV/EEE	30	100	21	84	92
13	deduction Terrorise registration and the state of the	MADHUMITHA S	IV/EEE	27	90	20	80	85
13	811217105017	MANO K	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, Chennal

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

Manikandam. Trichy-620 012.

	Number		YEAR/ BRANCH	Attenda	nce Details	VAC-M	OVERALL	
S.NO		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)
14	811217105018	MEKALA M	IV/EEE	30	100	20	80	
15	811217105020	PAVITHRA S	IV/EEE	27	90	19		90
16	811217105021	PRAVEEN RAJ R	IV/EEE	24	80	20	76	83
17	811217105022	RAJASEKAR.N V	IV/EEE	24	80	and Marie And Continue 44009-	80	80
18	811217105023	REVATHI P	IV/EEE	27	90	21 22	84	82
19	811217105024	RISHON GURU M	IV/EEE	30	100	20	88	89
20	811217105026	SANTHOSH K	IV/EEE	27	90	equitoria (1464 (America	80	90
21	811217105027	SRIKUMAR M S	IV/EEE	24	80	21	84	87
22	811217105028	SRI LOGESH C	IV/EEE	27	90	20	80	80
23	811217105029	SUBHA T	IV/EEE	30	100	21	84	87
24	811217105031	VALARMATHI C	IV/EEE	30	100	20	80	90
25	811217105032	VISWANATH R	IV/EEE	30	100	20	80	90
26	811217105301	SANJEEV KUMAR R	IV/EEE	30	er. Whelph what declare towards and	21	84	92
27	811218105001	ARUN PRAVEEN RAJ A	III/EEE	27	100	21	84	92
28	811218105002	HARIHARAN M	III/EEE	27	90	20	80	85
29	811218105003	INBARAJ A	III/EEE		90	19	76	83
30	811218105004	JEYA STEPHEN S	III/EEE	27	90	19	76	83
31	811218105005	MANIKANDAN N	III/EEE	27	90	20	80	85
32	811218105006	PADMANABAN A	III/EEE	30	100	21	84	92
		TAMMANANA	III/EEE	27	90	19	76	83



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.

		Name	YEAR/ BRANCH	Attenda	nce Details	VAC-M	OVERALL	
S.NO	Register Number			No. of Hours Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	MARK (100) (50% of A + 50% of B)
33	811218105007	SASIKUMAR R	III/EEE	24	80	21	84	82
34	811218105008	SIVAKUMAR P	III/EEE	27	90	20	80	85
35	811218105009	VEERA RAGAVAN A	III/EEE	30	100	21	84	92
36	811218105010	YUVARAJ S	III/EEE	27	90	19	76	83
37	811219105001	ARULRAJ .A	II/EEE	30	100	19	76	88
38	811219105002	BARATH M.M	II/EEE	30	100	20	80	
39	811219105003	MANIKANDAN A	II/EEE	30	100	21	84	90
40	811219105004	MANIKANDAN K	II/EEE	27	90	21	84	92 87
41	811219105005	PONNALAGU C	II/EEE	24	80	20	80	-
42	811219105006	SALAMON A	II/EEE	27	90	21	84	80
43	811219105007	SARAVANAKUMAR M	II/EEE	30	100			87
44	811219105008	SOLAIMATHI .K	II/EEE	27	90	20	80	90
45	811219105701	DHEVENTHIRAN .P	II/EEE	27	90	19	76	83
46	813919105301	VENKATRAMAN.A	II/EEE	24	80	21	84 80	87 80

VAC Coordinator

Gr. Ma Cath

HOD/EEE



VAC Goordinator

COLLEGE OF ENGINEERING Madural Main Road (NH-46B), Manikandam, Trichy-12. Approved by AICTE, NewDelhi & Affiliated to Anna University, Chennal

Title:	"ToT-R	taspbe	erry Pi "					4
		uresh, Design Engineer, Sai Software.			A. Siva Subramanian, Trainer, Sri Sai Software			
Date of conduct from:		08.02.2021		12.02.2021 Duration 30 Hour			30 Hours	
Organized	l Departn	nent	Electrical a	nd Electro	nics E	ngineerin	g	Paddiching to a square control
Participan		2,3,4			N	o. of Stud	ents Register	red: 46
1. Desc 2. Build 3. Ider	cribe the of a protol of the critical and the critical an	conce type u crent t	Added Cours pts of IoT alousing Arduino ypes of senso using Raspber IoT application	ng with its a Uno. rs, actuator rry pi.	s and co	ommunica		dents can able to
• Studen	nts, who	are s	ecuring more to receive the	e than 70% e certificate	% on the for the of 100 p	otal scor VAC cor ercentage	e and secure urse conducto + 0.5 *Test	ed more than 75% ed mark in VAC out of

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

HOD/EEE



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

Sample Photos of Value Added Course

Title:

"IoT-Raspberry Pi "

Resource Person:

M.Suresh,

Design Engineer,

Sri Sai Software.

Date of conduct from:

08.02.2021

To:

12.02.2021

Duration

30 Hours

Organized Department

Electrical and Electronics Engineering

Participant Year:

2,3,4

No. of Students Registered:

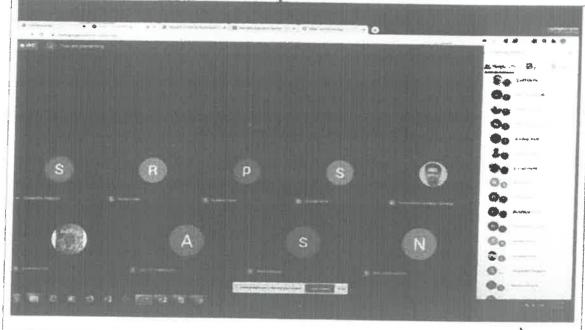
46

Venue:

Power System Simulation Lab, Ground floor

online mode Google Meet: meet.google.com/abd-hgde-djk

Sample Photos



VAC Coordinator

Gr. Ma Lather

Pripcipal

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

Principal







IGCE

CERTIFICATE OF PARTICIPATION

This is to certify that Ms. KUMARIVALLI T, IV Year, EEE has successfully completed the Value Added Course on "IoT-Raspberry Pi" organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Sri Sai Software from 08th February 2021 to 12th February 2021 (5days) during the Academic year 2020-2021.

Sri Sai Software Mr.R.Pavan Kumar Managing Director.

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







IGCE

CERTIFICATE OF PARTICIPATION

This is to certify that Mr. ARUN SEBASTIN P, IV Year, EEE has successfully completed the Value Added Course on "IoT-Raspberry Pi" organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Sri Sai Software from 08th February 2021 to 12th February 2021 (5days) during the Academic year 2020-2021.

Sri Sai Software Mr.R.Pavan Kumar Managing Director.

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. DEEPIKA G, IV Year, EEE has successfully completed the Value Added Course on "IoT-Raspberry Pi" organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Sri Sai Software from 08th February 2021 to 12th February 2021 (5days) during the Academic year 2020-2021.

Sri Sai Software Mr.R.Pavan Kumar Managing Director.

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

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

IGCE







This is to certify that Ms. MEKALA M, IV Year, EEE has successfully completed the Value Added Course on "IoT-Raspberry Pi" organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Sri Sai Software from 08th February 2021 to 12th February 2021 (5days) during the Academic year 2020-2021.

Sri Sai Software Mr.R.Pavan Kumar Managing Director.

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

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







This is to certify that Mr. VISWANATH R, IV Year, EEE has successfully completed the Value Added Course on "IoT-Raspberry Pi" organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Sri Sai Software from 08th February 2021 to 12th February 2021 (5days) during the Academic year 2020-2021.

Sri Sai Software Mr.R.Pavan Kumar Managing Director.

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

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

IGCE







IGCE

CERTIFICATE OF PARTICIPATION

This is to certify that Mr. SANJEEV KUMAR R, IV Year, EEE has successfully completed the Value Added Course on "IoT-Raspberry Pi" organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Sri Sai Software from 08th February 2021 to 12th February 2021 (5days) during the Academic year 2020-2021.

Sri Sai Software Mr.R.Pavan Kumar Managing Director.

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







This is to certify that Mr. YUVARAJ S, III Year, EEE has successfully completed the Value Added Course on "IoT-Raspberry Pi" organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Sri Sai Software from 08th February 2021 to 12th February 2021 (5days) during the Academic year 2020-2021.

Sri Sai Software Mr.R.Pavan Kumar Managing Director.

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. MANIKANDAN N, III Year, EEE has successfully completed the Value Added Course on "IoT-Raspberry Pi" organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Sri Sai Software from 08th February 2021 to 12th February 2021 (5days) during the Academic year 2020-2021.

Sri Sai Šoftware Mr.R.Pavan Kumar Managing Director.

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

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







This is to certify that Mr. SASIKUMAR R, III Year, EEE has successfully completed the Value Added Course on "IoT-Raspberry Pi" organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Sri Sai Software from 08th February 2021 to 12th February 2021 (5days) during the Academic year 2020-2021.

Sri Sai Šoftware Mr.R.Pavan Kumar Managing Director. 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. SIVAKUMAR P, III Year, EEE has successfully completed the Value Added Course on "IoT-Raspberry Pi" organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Sri Sai Software from 08th February 2021 to 12th February 2021 (5days) during the Academic year 2020-2021.

Sri Sai Šoftware Mr.R.Pavan Kumar Managing Director.

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

Principal

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

IGCE







This is to certify that Mr. PADMANABAN A, III Year, EEE has successfully completed the Value Added Course on "IoT-Raspberry Pi" organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Sri Sai Software from 08th February 2021 to 12th February 2021 (5days) during the Academic year 2020-2021.

Sri Sai Software Mr.R.Pavan Kumar Managing Director.

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

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

Principal IGCE







This is to certify that Mr. VEERA RAGAVAN A, III Year, EEE has successfully completed the Value Added Course on "IoT-Raspberry Pi" organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Sri Sai Software from 08th February 2021 to 12th February 2021 (5days) during the Academic year 2020-2021.

Sri Sai Šoftware Mr.R.Pavan Kumar Managing Director.

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

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

Principal IGCE







This is to certify that Ms. SOLAIMATHI .K, II Year, EEE has successfully completed the Value Added Course on "IoT-Raspberry Pi" organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Sri Sai Software from 08th February 2021 to 12th February 2021 (5days) during the Academic year 2020-2021.

Sri Sai Software Mr.R.Pavan Kumar Managing Director.

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

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

IGCE







This is to certify that Mr. BARATH M, II Year, EEE has successfully completed the Value Added Course on "IoT-Raspberry Pi" organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Sri Sai Software from 08th February 2021 to 12th February 2021 (5days) during the Academic year 2020-2021.

Sri Sai Software Mr.R.Pavan Kumar Managing Director.

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

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







IGCE

CERTIFICATE OF PARTICIPATION

This is to certify that Mr. MANIKANDAN K, II Year, EEE has successfully completed the Value Added Course on "IoT-Raspberry Pi" organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Sri Sai Software from 08th February 2021 to 12th February 2021 (5days) during the Academic year 2020-2021.

Sri Sai Software Mr.R.Pavan Kumar Managing Director.

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







This is to certify that Mr. SALAMON A, II Year, EEE has successfully completed the Value Added Course on "IoT-Raspberry Pi" organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Sri Sai Software from 08th February 2021 to 12th February 2021 (5days) during the Academic year 2020-2021.

Sri Sai Software Mr.R.Pavan Kumar Managing Director.

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

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







This is to certify that Mr.SARAVANAKUMAR M, II Year, EEE has successfully completed the Value Added Course on "IoT-Raspberry Pi" organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Sri Sai Software from 08th February 2021 to 12th February 2021 (5days) during the Academic year 2020-2021.

Sri Sai Software Mr.R.Pavan Kumar Managing Director.

Principal IGCE

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







This is to certify that Mr. DHEVENTHIRAN .P, II Year, EEE has successfully completed the Value Added Course on "IoT-Raspberry Pi" organized by Department of Electrical & Electronics Engineering and IQAC of our Institution in Association with Sri Sai Software from 08th February 2021 to 12th February 2021 (5days) during the Academic year 2020-2021.

Sri Sai Software Mr.R.Pavan Kumar Managing Director.

Principal IGCE

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