

# SRI BHARATHI

ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai)

Kaikkurichi, Pudukkottai -622 303

www.sbec.edu.in

# **NAAC DOCUMENTS**



Quality Indicator Frame Work

Criterion – 2

Teaching-Learning and Evaluation

Submitted by

IQAC
Internal Quality Assurance Cell

Sri Bharathi Engineering College for Women

(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai-25) Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

Criteria 2 Teaching-Learning and Evaluation

350

**Key Indicator- 2.3. Teaching- Learning Process (40)** 

2022-2023

# COMPUTER SCIENCE AND ENGINEERING

# PARTICIPATIVE LEARNING

Activity	Number of Students Attended	Page No.
Value Added Course (VAC)	143	3
Symposium and Conference	60	92
TOTAL STUDENTS ATTENDED	203	-

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Criteria 2

**Teaching-Learning and Evaluation** 

350

**Key Indicator- 2.3. Teaching- Learning Process (40)** 

2022-2023

# COMPUTER SCIENCE AND ENGINEERING

# PARTICIPATIVE LEARNING VALUE ADDED COURSE



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### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

#### ACADEMIC YEAR 2022-2023 / ODD SEMESTER

Date: 26 / 07 /2022

#### DEPARTMENT CIRCULAR

A Value added course on "Internet of Things with Python" will be conducted by MECK TECK Research Foundation, Pudukkottai in the college campus for all Third year and Final year CSE students from 03.08.2022 to 10.08.2022. Certificates will be issued to all the participants at the end of the Course.

S.No.	Name of the Course	Resource Person
1.	Internet of Things With Python	Resource Person: 1. Dr.K.Gurunathan M.E Ph.D Master Trainer MECK TECK Research Foundation

Cc:

· Principal's office

IQAC Coordinator

· Class In charge-III,IV year

• CSE Students - III, IV year

Notice Board

Dr. S.THILAGAVATH M.A., Ph.D.,

SRI BHARATHI ENGINEERING COLLEGE FOR WOMFN Kaikkurchi - 622 303, Pudukkolia. Dt. HOD / CSE

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN KAKKURICHI,

PUDUKKOTTAI - 622 303



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### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING <u>ACADEMIC YEAR 2022-2023 / ODD SEMESTER</u>

# Value Added Course on "INTERNET OF THINGS WITH PYTHON" SYLLABUS

S.NO	TOPIC COVERED	DURATION (in hours)	DATE FN/AN
1	Understanding IoT fundamentals - IOT Architecture and protocols	3	03.08.2022
2	Various Platforms for IoT - Real time Examples of IoT	3	03.08.2022
3	Arduino Uno Architecture - Setup the IDE, Writing Arduino Software - Arduino Libraries	3	04.08.2022
4	Overview of IoT components and IoT Communication Technologies - Challenges in IOT	3	04.08.2022
5	Basics of Embedded C programming for Arduino	3	05.08.2022
6	Interfacing LED, push button and buzzer with Arduino	3	05.08.2022
7	Interfacing Arduino with LCD	3	08.08.2022
8	Overview of Sensors working - Analog and Digital Sensors	3	08.08.2022
9	Interfacing of Temperature, Humidity, Motion, Light and Gas Sensor with Arduino	3	09.08.2022
10	Interfacing of Actuators with Arduino	3	09.08.2022
11	Interfacing of Relay Switch and Servo Motor with	3	10.08.2022
12	Arduino M2M vs. IOT - Communication Protocols	3	10.08.2022
	Total Periods :	36	

VAC Coordinator

Dr. S.THILAGAVATHI M.E., Ph.D.,
PRINCIPAL

SRI BHARATHI ENGINEERING COLLEGE FOR 1411 Kaikkurch: - 622 303, Paudano...... Dt. CHOD / CSE

SRI BHARATHI ENGINEERING

COLLEGE FOR WOMEN

KAIKKURICHI,

PUDUKKOTTAI - 622 303



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### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

# ACADEMIC YEAR 2022-2023 (ODD SEM) STUDENTS PARTICIPATION LIST-VAC PROGRAM

### INTERNET OF THINGS WITH PYTHON

S.NO	REG.NO	NAME OF THE STUDENT	YEAR/BRANCH
	E AMI	TAT EASCIDO - GODANTETAS	
1.	912620104001	AKALYA S	III/CSE
2.	912620104002	HEMA V	III/CSE
3.	912620104003	ISWARYA R	III/CSE
4.	912620104004	KALAIVANI S	III/CSE
5.	912620104005	KALPANA K	III/CSE
6.	912620104007	MEIYYAMMAL M	III/CSE
7.	912620104008	NANDHINI P	III/CSE
8.	912620104009	PRASANNA DEVI P	III/CSE
9.	912620104010	PRISHIYA E	III/CSE
10.	912620104012	ROSAMMAL M	III/CSE
11.	912620104013	ROSHIKA K	III/CSE
12.	912620104014	SABHA AYSHA S	III/CSE
13.	912620104015	SATHIYASRI P	III/CSE
14.	912620104016	SIVAGAMI D	III/CSE
15.	912620104017	SIVAHARINI S	III/CSE
16.	912620104018	SUBASHINI C	III/CSE
17.	912620104019	SUBASHINI M	III/CSE
18.	912620104020	SWETHA D  Dr. S.THILAGAVATHI M.E.	III/CSE

PRINCIPAL SRI BHARATHI ENGINEEDING COLLEGE FO!

19.	912620104021	VANATHI T	III/CSE
- 20.	912620104022	VINCIYA MARY S	III/CSE
21.	912620104304	VAISHNAVI R	III/CSE
22.	912619104001	ANNAPOORANI M	IV /CSE
23	912619104003	ARUNNAVAMEENA A	IV/CSE
24	912619104004	DAYANA P	IV/CSE
25	912619104005	DHARSHINI D	IV/CSE
26	912619104007	FAHMIDHA B	IV/CSE
27	912619104009	GULNAS FATHIMA S	IV/CSE
28	912619104010	HELAN J	IV/CSE
29	912619104011	KEERTHANA R	IV/CSE
30	912619104012	MUTHULAKSHMI G	IV/CSE
31	912619104013	MUTHU MEENAKSHI M	IV/CSE
32	912619104014	NIROSHIKA R	IV/CSE
33	912619104017	PARAMESHWARI S	IV/CSE
34	912619104019	RANJANI K	IV/CSE
35	912619104020	RILWANA PARVEEN J	IV/CSE
36	912619104021	ROOPINA R	IV/CSE
37	912619104022	SANDHIYA B	IV/CSE
38	912619104023	SANTHI D	IV/CSE
39	912619104024	SARANYA C	IV/CSE
40	912619104027	SNEHA R	IV/CSE
41	912619104029	SURIYA JOTHI S	IV/CSE
42	912619104301	ABINAYA S	IV/CSE

Dr. S.THILAGAVAFHT N.E., Ph.D.,
PRINCIPAL
SRI BHARATHI ENGINEERING

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HOD/CSE SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN KAIKKURICHI, PUŅUKKOTTAI - 622 303



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#### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 (ODD SEM)

### ATTENDANCE SHEET FOR VALUE ADDED COURSE-INTERNET OF THINGS WITH PYTHON

s.NO	REG.NO	NAME OF THE	YEAR/	DATE: 03.08.22		DATE: 04.08.22		1	DATE: 05.08.22		DATE: 08.08.22	DATE: 09.08.22			TE: 8.22	NO OF SESSIONS	SIGNATURE OF THE
50		STUDENT	BRANCH	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	ATTENDED	STUDENT
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2	912620104002	HEMA V	III/CSE	1	)	1	1	1	1	1	1	1	1	1	9	12	idw
3	912620104003	ISWARYA R	III/CSE	1	1	1	1	,	,	1	1	1	1	1	,	12	tehut
4	912620104004	KALAIVANI S	III/CSE	1	1	)	,	1	1	r	1	1	,	1	,	12	Kelan Vanne.
5	912620104005	KALPANA K	III/CSE	ſ	1	1	1	1	1	1	1	,	1	1	1	. 12	KKall-
6	912620104007	MEIYYAMMAL M	III/CSE	1	,	,	)	1	1	1	1	1	,	,	,	12	M. Mary
7	912620104008	NANDHINI P	III/CSE	1	1	1	,	1	1	1	1	1	1	1	1	12	Rtal.
8	912620104009	PRASANNA DEVI P	III/CSE	1	,	1	1	1	1	1	1	1	,	,	1	12	Prasinot
9	912620104010	PRISHIYA E	III/CSE	1	,	1	1	1	1	1	,	1	,	1	1	12	Prist-
10	`912620104012	ROSAMMAL M	III/CSE S.THILAGA	vati	IVM F	Phr	)	(	7	1	1	1	1	1	)	12	Kan !

COLLEGE FOR WOMEN Kakkurchi - 622 303, Pudukkotta! Dt.

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12	912620104014	SABHA AYSHA S	III/CSE	1	1	1	1	1	1	1	1	1	1	1	1	12	8. Solly
13	912620104015	SATHIYASRI P	III/CSE	. (	1	1	1	1	1	1	1	1	1	1	1	12	B. Sathiya-
14	912620104016	SIVAGAMI D	III/CSE	-	1	1	1	1	1	1	1	1	5	1	1	12	Day
15	912620104017	SIVAHARINI S	III/CSE	1	1	1	1	1	1	1	1	/	1	1	1	12	Spir
16	912620104018	SUBASHINI C	III/CSE	1	)	1	1	1	1	1	,	,	,	,	1	12	C. Subaj
17	912620104019	SUBASHINI M	III/CSE	1	1	1	1	1	1	1	1	1	1	,	1	12	Mil.
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21	912620104304	VAISHNAVI R	III/CSE	(	1	1	1	1	1	1	1	,	1	1	,	12	R. Voisty.
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24	912619104004	DAYANA P	IV/CSE	1	1	la de	1	1	1	1	1	1	1	1	1	12	Dayana.
25	912619104005	DHARSHINI D	IV/CSE	1	1		,	1	1	1	1	1	1	1	1	12	Dhasash
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31	912619104013	MUTHU MEENAKSHI M	IV/CSE	1	1	1	,	1	1	P	1	1	1	1	1	12	Mos
32	912619104014	NIROSHIKA R	IV/CSE	1	.,	1	,	1	1	1	1	1	1	1	1	12	Virasiko
33	912619104017	PARAMESHWARI S	IV/CSE	1	1	1	,	1	1	(	1	1	1	1	1	12	Draseshy
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35	912619104020	RILWANA PARVEEN J	IV/CSE	1	1	1	,	1	1	1	1	1	1	1	1	12	Polar Film
36	912619104021	ROOPINA R	IV/CSE	1	1	1	1	1	1	/	1	,	/	1	1	12	Agest
37	912619104022	SANDHIYA B	IV/CSE	1	1	1	1	1	1	1	1	1	1	1	/	12-	Smy
38	912619104023	SANTHI D	IV/CSE	ļ	1	1	. /	1	1	1	1	1	1	1	1	12	Santhi
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Dr. S.THILAGAVATHI M.E., Ph.D.,
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SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt.

HOD/CSE HOD/CSE SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN KAIKKURICHI,

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25) Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India

### Report on Value Added Course

Title:

Internet of Things With Python

Resource Person:

Dr.K.Gurunathan M.E Ph.D

Trainer

Meck Teck Research Foundation

Date of conduct from:

03.08.2022

To: 10.08.2022

Duration:

30 Hours

Organized Department:

Computer Science and Engineering

Participant Year:

3,4(CSE)

Semester:

No. of Students Registered:

42

Venue:

Auditorium

#### Outcome of Value Added Course (VAC)

ODD

#### At the end of the VAC course the student can able to

- Explain fundamentals about IoT
- Illustration of IoT Access technologies
- Design methodology and different IoT hardware platforms.
- Identify with the application areas of IOT
- Realize the revolution of Internet in Mobile Devices, Cloud & Sensor Networks
- Describe the building blocks of Internet of Things and characteristics.

#### Assessment Process

- Students securing more than 60% 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)

VAC Coordinator

Hod/CSE

Principal

SRI BHARATHI ENGINEERI COLLEGE FOR WOMEN

> KAIKKURCHI - \$22 303. PUDUKKOTTAI DISTRICT

Dr. S.THILAGAVATHI M.E., Ph.D.,

PRINCIPAL

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

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# **SRI BHARATHI**



ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

Kaikkurichi, Pudukkottai, Tamil Nadu - 622 303, India

# CERTIFICATE OF COMPLETION

This is to certify that Ms.K.Kalpana of III CSE has completed 5 days value added course about "Internet of things with PYTHON" from 03.08.2022 to 10.08.2022 during the academic year 2022-2023.

CEO Meck Teck PRINCIPAL SBECW

Dr. S.THILAGATATHI M.E., Ph.D.,

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

Kaikkurchi - 622 303, Pudukkottai Dt.



# **SRI BHARATHI**



ENGINEERING COLLEGE FOR WOMEN

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

Kaikkurichi, Pudukkottai, Tamil Nadu - 622 303, India

# CERTIFICATE OF COMPLETION

This is to certify that Ms.R.SNEHA of IV CSE has completed 5 days value added course about "Internet of things with PYTHON" from 03.08.2022 to 10.08.2022 during the academic year 2022-2023.

1.1.

CEO Meck Teck PRINCIPAL

Dr. S.THILAGAVATHIN, E., Ph. DSBECW

PRINCIPAL

Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India (Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

# DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING ACADEMIC YEAR 2022-2023 / ODD SEMESTER

Name of the Student:	Year/Sem:
AU Register Number:	
Value Added Course on "Inte	rnet of Things With Python"
MCQ QUESTIONS	(25X1 = 25 Marks)
1. Which of the following is false about IoT device	ces?
a) IoT devices use the internet for collecting and sharing data	c) IoT devices use wireless technology
b) IoT devices need microcontrollers	d) IoT devices are completely safe
2. Which of the following is not an IoT platform?	a) VIIII, programmand
a) Amazon Web Services	c) Salesforce
b) Microsoft Azure	d) Flipkart
3. Which of the following is not an application of	IoT?
a) BMP280	c) Smart city
b) Smart home	d) Self-driven cars
4. Which of the following is not a fundamental con	apponent of an IoT system?
a) Sensors	c) User interface
b) Connectivity and data processing	d) Transformer
5. Which layer is used for wireless connection in Io	oT devices?
a) Application layer	c) Data link layer
b) Network layer	d) Transport layer
6. Which of the following is false about the IoT co	omponents?
a) A light sensor (photoresistor) is an analog sensor	c) A push button is a digital sensor
b) A microphone is a digital sensor	d) A keyboard is a digital sensor
7. Which of the following is used to capture data	from the physical world in IoT devices?
a) Sensors	c) Microprocessors
b) Actuators	d) Microcontrollers
8. Which of the following command is used to tr	igger the Amazon echo IOT device?
a) Hello	c) Alexa

Dr. S.THILAGAVATHI M.E., Ph.D.,
PRINCIPAL

b) Suri

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN Kaikkurchi - 622 303, Pudukkottai Dt.

d) Hey

9. Which of the following is false about the MAN	NET IoT network?
<ul><li>a) It is a self-configuring network</li><li>b) It has a low data rate</li></ul>	<ul><li>c) It doesn't have any encryption</li><li>d) Power is readily available for complex security</li></ul>
	security
10. Which of the following is not a sensor in IoT?	DEPARTMENT OF COMP.
a) BMP280	c) Photoresistor
b) DHT11	d) LED
11. Which of the following is not an actuator in	IoT?
a) Stepper motor	c) An LED
b) A fan	d) Arduino
12. What is the use of PWM signals in IoT deve	elopment boards?
a) They are used by sensors to have analog	c) They are used by actuators to have analog
input	input
b) They are used by sensors to have digital	d) They are used by actuators to have digital
input gather actively Tell (a gather	input and sau sooned Tolks
13. Which of the following is used to reprogram	a Bootloader in IoT devices?
a) VHDL programming	c) ICSP
b) IDE	d) MANET
14. Which of the following is true about Arduin	o IoT devices?
a) They are open-source software	c) They have their own operating systems
b) They can only read analog inputs	d) They don't have pre-programmed firmware
15. How many number of elements in the Open	IoT Architecture?
a) 3 elements	c) 8 elements
b) 7 elements	d) 6 elements
16. IoT-A stands for	
a) Internet of Things Area	c) Internet of Things Address
b) Industrial of things Architecture	d) Internet of Things Architecture
17. Which of the following is not a feature of th	e Rasnherry PI model R IoT device?
a) It has 256 MB SDRAM	c) It has its own operating system
b) It has a single USB connector	d) It has an Ethernet port
malog (a charto de a chaird sensor	en al (totalauronoid) pamas riigil A (a
18. Which of the following processor is used in	* *
a) Broadcom BCM2711	c) Broadcom BCM2838
b) Broadcom BCM2837	d) Intel 8085
19. Which library is used to access I2C in Ardui	ino IoT devices?
a) EEPROM	c) DHT11
b) Wire	d) ArduinoJson
	2 Which of the following constant is

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20. Which of the following is not re	lated to Arduino IDE IoT software?
a) Serial monitor	c) Upload
b) Verify	d) Terminate
21. Which of the following is a comp	plete line of home IoT devices that include smart switches?
a) Belkin's WeMo	c) Awair
b) Cinder	d) Canary
22. IoT gateway must provide	
a) Protocol abstraction	c) Security with hardware
b) Data storage	d) Simple and fast installation
23. What IoT collects?	
a) Device data	c) Sensor data
b) Machine generated data	d) Human generated data
24. Which of the following protocol	is used to link all the devices in the IoT?
a) HTTP	c) Network
b) UDP	d) TCP/IP
25. Which service permits the change	ges to the IoT services?
a) Update	c) Enable from suspension
b) Registered service status	d) Enable
	W. Collinson
	VAC Coordinate

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# DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING ACADEMIC YEAR 2022-2023 / ODD SEMESTER

Value Added Course on "Internet of Things With Python"

### ANSWER KEY

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

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VAC Coordinator



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# DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING <u>ACADEMIC YEAR 2022-2023 / ODD SEMESTER</u>

	22-2025 / ODD SEMESTER
Name of the Student: R. Vaishnav	
AU Register Number: 91262010	4304
	ternet of Things With Python"
MCQ QUESTION	S (25X1 = 25 Marks)
1. Which of the following is false about IoT dev	vices?
<ul> <li>a) IoT devices use the internet for collecting and sharing data</li> </ul>	c) IoT devices use wireless technology
b) IoT devices need microcontrollers	d IoT devices are completely safe
2. Which of the following is not an IoT platform	1?
a) Amazon Web Services	c) Salesforce
b) Microsoft Azure	(d) Flipkart
3. Which of the following is not an application of	of IoT?
a) BMP280	c) Smart city
b) Smart home	d) Self-driven cars
4. Which of the following is not a fundamental co	mponent of an IoT system?
(a) Sensors	c) User interface
b) Connectivity and data processing	d) Transformer
5. Which layer is used for wireless connection in I	oT devices?
a) Application layer	c) Data link layer
b) Network layer	d)Transport layer
6. Which of the following is false about the IoT co	omponents?
a) A light sensor (photoresistor) is an analog sensor	push button is a digital sensor
b) A microphone is a digital sensor	d) A keyboard is a digital sensor
7. Which of the following is used to capture data	from the physical world in IoT devices?
a) Selisors	c) Microprocessors
(6) Actuators	d) Microcontrollers
8. Which of the following command is used to tr	igger the Amazon echo IOT device?
a) riello	c) Alexa Dr. S.THILAGAVATHI M.E., Ph.D.,
b) Suri	d) Hey PRINCIPAL SRI BHARATHUF MOMENTS AND S
Th	Kankuren - 522 500, 16

9. Which of the following is false about the MA	NET IoT network?
a) It is a self-configuring network	c) It doesn't have any encryption
b) It has a low data rate	(d) Power is readily available for complex
b) it has a low data rate	security
10. Which of the following is not a sensor in IoT	? ELMOO COTABATEMEN
a) BMP280	c) Photoresistor
b) DHT11	(d) LED
	Name of the Student 2 Kt Vas
11. Which of the following is not an actuator in	n IoT?
a) Stepper motor	c) An LED
b) A fan	(d) Arduino
Internet of American Sum Padeon"	
12. What is the use of PWM signals in IoT dev	elopment boards?
a) They are used by sensors to have analog	(c) They are used by actuators to have analog
input /	input
b) They are used by sensors to have digital	d) They are used by actuators to have digital
input a section a self-section and section	input
12 White Cale Callering in the second second	Destleder in IeT devices?
13. Which of the following is used to reprogra	/ \
a) VHDL programming	(c) ICSP d) MANET
b) IDE	d) MANET
14. Which of the following is true about Ardui	ino IoT devices?
(a) They are open-source software	c) They have their own operating systems
b) They can only read analog inputs	d) They don't have pre-programmed firmward
b) They can only read undrog inputs	(M290MP2M)
15. How many number of elements in the Ope	n IoT Architecture?
a) 3 elements	c) 8 elements
(b) 7 elements	d) 6 elements
	ye (C) Sensors
16. IoT-A stands for	
a) Internet of Things Area	c) Internet of Things Address
b) Industrial of things Architecture	(d) Internet of Things Architecture
ep. Days link layer	a Application layer
17. Which of the following is not a feature of	
(a) It has 256 MB SDRAM	c) It has its own operating system
b) It has a single USB connector	d) It has an Ethernet port
see the seed of th	A D. A. DIAL T. L. C.
18. Which of the following processor is used i	
a) Broadcom BCM2711	c) Broadcom BCM2838
(b) Broadcom BCM2837	d) Intel 8085
10 WILL II	luina LaT daviage?
19. Which library is used to access I2C in Ard	
EEPROM	c) DHT11
(b) Wire	d) ArduinoJson
Contrad tentados us com a las actual	/ Comment
	IIM P. Ph.D.
Dr. S.THILAGAVAT	1 IV. C.
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20. Which of the following is not related to	o Arduino IDE IoT software?
a) Serial monitor	
b) Verify	c) Upload
	(d) Terminate
Which of the following is a complete li	ne of home I-T I
a) Belkin's WeMo	ne of home IoT devices that include smart switches?
b) Cinder	c) Awair
	d) Canary
22. IoT gateway must provide	
a) Protocol abstraction	
b) Data starraction	c) Security with hardware
b) Data storage	d) Simple and fast installation
A 23. What IoT collecte?	
That for conects:	
a) Device data	c) Sensor data
(b) Machine generated data	d) Human generated data
24	
24. Which of the following protocol is used	to link all the devices in the IoT2
4) 111 11	c) Network
b) UDP	d) TCP/IP
25. Which service permits the changes to the	e IoT services?
( a) Opdate	
b) Registered service status	c) Enable from suspension
	d) Enable
	'2
	0.10
	VAC Coordinator
	VIC Cooldinator
Dr. S.THILAGA	VATHIM.E.,Ph.D.,
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COLLEGE	FOR WOMEN
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Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India (Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25) DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 (ODD SEM)

### MARK SHEET FOR VALUE ADDED COURSE- INTERNET OF THINGS WITH PYTHON

	47124	6, 87 9, 107 11 71	HISTORY	ATTENDAN	ICE DETAILS	VAC-M	OVERALL		
S.NO	REG.NO	NAME OF THE STUDENT	YEAR/ BRANCH	No of Sessions Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	MARK(100) (50% of A + 50% of B)	
1	912620104001 AKALYA S		III/CSE	12	100	22	88	94	
2	912620104002	620104002 HEMA V		12 100 23	III/CSE 12 100 23 92	92	96		
3	912620104003	ISWARYA R	III/CSE	12	100	24	96	98	
4	912620104004	KALAIVANI S	III/CSE	12	100	20	80	90	
5	912620104005 KALPANA K		III/CSE 12 100 18 72	72	86				
6	912620104007	0104007 MEIYYAMMAL M III/CSE 12	12	100	19	76	88		
7	912620104008	912620104008 NANDHINI-P		12	100	21	84	92	

8	912620104009	PRASANNA DEVI P	III/CSE	12	100	20	80	90	
9	912620104010	PRISHIYA E	III/CSE	III/CSE 12	100	21	84	92	
10	912620104012	ROSAMMAL M	III/CSE	12	100	21	84	92	
1	912620104013	ROSHIKA K	III/CSE	12	100	22	88	94	
12	912620104014	SABHA AYSHA S	III/CSE	12	100	23	92	96	
3	912620104015	12620104015 SATHIYASRI P III/CSE 12 100					88	94	
4	912620104016	SIVAGAMI D	III/CSE	12	100	23	92	96	
5	912620104017	SIVAHARINI S	III/CSE	12	100	21	84	92	
6	912620104018	SUBASHINI C	III/CSE	12	100	22	88	94	
7	912620104019	SUBASHINI M	SUBASHINI M	III/ÇSE	12	100	23	92	96
8	912620104020	SWETHA D	III/CSE	12	100	23	92	96	
9	912620104021	VANATHI T	III/CSE	12	100	22	88	100	
0	912620104022	VINCIYA MARY S	III/CSE	12	100	21	84	92	
.1	912620104304	VAISHNAVI R	Dr. S.THIL	12 AGAVATHI M PRINCIPAL	100 M.E.,Ph.D.,	23	92	96	

22	912619104001 ANNAPOORANI M		IV /CSE	12	100	20	80	90
23	912619104003	ARUNNAVAMEENA A	IV/CSE	12	100	18	72	86
24	912619104004	DAYANA P	IV/CSE	12	100	21	84	5 303 92
25	912619104005	DHARSHINI D	IV/CSE	12	100	23	92	96
26	912619104007	FAHMIDHA B	IV/CSE	12	100	19	76	88
27	912619104009	4009 GULNAS FATHIMA S IV/C		12	100	19	76	88
28	912619104010	HELAN J	IV/CSE	12	100	24	96	98
29	912619104011	KEERTHANA R	IV/CSE	12	100	21	84	92
30	912619104012	MUTHULAKSHMI G	IV/CSE	12	100	22	88	94
31	912619104013	MUTHU MEENAKSHI M	IV/CSE	12	100	23	92	96
32	912619104014	NIROSHIKA R	IV/CSE	12	100	21	84	92
33	912619104017	PARAMESHWARI S	IV/CSE	12	100	21	84	92
34	912619104019	RANJANI K	IV/CSE	12 .	100	20	80	90
35	912619104020	RILWANA PARVEEN J	IV/CSE	12	100	23	92	96
			Dr. S.THILAG	AVATHI M.E.,	Ph.D.,			

36	912619104021	ROOPINA R	IV/CSE	12	100	22	88	94	
37	912619104022 SANDHIYA B		IV/CSE	12	100	21	84	92	
38	912619104023	SANTHI D	IV/CSE	12	100	19	76	88	
39	912619104024	SARANYA C	IV/CSE	12	100	18	72	86	
40	912619104027	SNEHA R	IV/CSE	12	100	19	76	88	
41	912619104029	SURIYA JOTHI S	IV/CSE	12	100	23	92	96	
42	912619104301	ABINAYA S	IV/CSE	12	100	21	84	92	

VAC Coordinator

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### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

#### ACADEMIC YEAR 2022-2023 / ODD SEMESTER

Date: 16/08/2022

#### DEPARTMENT CIRCULAR

A Value added course on "Internet of Things with Python" will be conducted by GALWIN Technology, Trichy in the college campus for all Second year from 22.08.2022 to 26.08.2022. Certificates will be issued to all the participants at the end of the Course.

S.No.	Name of the Course	Resource Person
1.	Internet of Things With Python	Resource Person: Mr.Kamalakannan Trainer GALWIN Technology

Cc:

- · Principal's office
- IQAC Coordinator
- · Class In charge-II year
- CSE Students II year
- Notice Board.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

<u>ACADEMIC YEAR 2022-2023 / ODD SEMESTER</u>

# Value Added Course on "INTERNET OF THINGS WITH PYTHON" SYLLABUS

S.NO	TOPIC COVERED	DURATION (in hours)	DATE FN/AN
1	Understanding IoT fundamentals - IOT Architecture and protocols	3	22.08.2022
2	Various Platforms for IoT - Real time Examples of IoT	3	22.08.2022
3	Arduino Uno Architecture - Setup the IDE, Writing Arduino Software - Arduino Libraries	3	23.08.2022
4	Overview of IoT components and IoT Communication Technologies - Challenges in IOT	3	23.08.2022
5	Basics of Embedded C programming for Arduino	3	24.08.2022
6	Interfacing LED, push button and buzzer with Arduino	3	24.08.2022
7	Interfacing Arduino with LCD	3	25.08.2022
8	Overview of Sensors working - Analog and Digital Sensors	3	25.08.2022
9	Interfacing of Temperature, Humidity, Motion, Light and Gas Sensor with Arduino	3	26.08.2022
10	Interfacing of Actuators with Arduino	3	26.08.2022
	Total Periods :	30	

VAC Coordinator

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### DEPARTMENT OF COMPUTER SCENCE AND ENGINEERING

# ACADEMIC YEAR 2022-2023 (ODD SEM) STUDENTS PARTICIPATION LIST-VAC PROGRAM

### INTERNET OF THINGS WITH PYTHON

S.NO	REG.NO	NAME OF THE STUDENT	YEAR/BRANCH		
	BEDITLE	A AMBRINIBRIY I Sessot	S9116 2		
1.	912621104001	ABINAYA K	II /CSE		
2.	912621104002	AMEERA N	II /CSE		
3.	912621104003	ANJUGAM C	II/CSE		
4.	912621104004	ARUNDATHI S	II /CSE		
5.	912621104005	ASHIKA B	II /CSE		
6.	912621104006	DIVYA T	II /CSE		
7.	912621104007	ELACKIYA G	II /CSE		
8. 912621104008		GAYATHRI K	II /CSE		
9.	912621104009	GEETHA M	II /CSE		
10.	912621104010	HARSHITHA P	II /CSE		
11.	912621104011	ISHWARYA S	II /CSE		
12.	912621104012	JANANI R	II /CSE		
13.	912621104015	LAVANYA S	II /CSE		
14.	912621104016	MAHASREE P	II /CSE		
15.	912621104018	PRIYA M	II /CSE		
16.	912621104019	RABIKA R	II /CSE		
17.	912621104021	SAHEENA BEGAM A	II /CSE		
18.	912621104022	SASIPRIYA R	II /CSE		

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19.	912621104023	SHAMIMA P	II /CSE		
20.	912621104024	SHEERA BANU A	II /CSE		
21.	912621104025	SIVAJOTHIKA S	II /CSE		
22. 912621104026		SIVAPRIYA R	II /CSE		
23.	912621104027	SUBHA DHARSHINI S	II /CSE		
24.	912621104028	SUBIKSHA S	II /CSE		
25.	912621104029	VINITHA K	II /CSE		
26.	912621104030	VISALATCHI S	II /CSE		
27.	912621104301	VISHNAVI B	II /CSE		
28.	912621104302	VISHNUPRIYA A	II /CSE		
29.	912621104701	AARTHI S	II /CSE		
30.	912621104702	SWATHI A.R	II /CSE		

VAC Coordinator

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Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India
DEPARTMENT OF COMPUTER SCENECE AND ENGINEERING

ACADEMIC YEAR 2022-2023 (ODD SEM)

### ATTENDANCE SHEET FOR VALUE ADDED COURSE- INTERNET OF THINGS WITH PYTHON

s.NO	REG.NO	NAME OF THE YEAR/	II I SE	DATE: 22.08.22		DATE: 23.08.22		DATE: 24.08.22		DATE: 25.08.22		DATE: 26.08.22		NO OF .	SIGNATURE OF THE
35		STUDENT	BRANCH	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	ATTENDED	STUDENT
1.	912621104001	ABINAYA K	II /CSE	1	1	1	1	/	1	1	/	/	1	10	Il Abirage
2.	912621104002	AMEERA N	II /CSE	1	1	1	1	1	1	1	1	1	1	10	Ame
3.	912621104003	ANJUGAM C	II /CSE	1	1	1	1	1	1	1	/	1	1	10	(Aul.
4.	912621104004	ARUNDATHI S	II /CSE	1	/	1	/	1	1	1	/	1	1	10	Sent.
5.	912621104005	ASHIKA B	II /CSE	1	/	a	a	/	1	1	1	/	/	08	doustupa.
6.	912621104006	DIVYA T	II /CSE	1	1	1	1	1	1	1	1	a	a	08	T. D.R.
7.	912621104007	ELACKIYA G	II /CSE	1	/	1	1	1	1	1	1	,	1	ю	G.E.P.
8.	912621104008	GAYATHRI K	II /CSE	1	1	1	1	1	1	1	1	1	1	10	60.24 C
9.	912621104009	GEETHA M	II /CSE	1	1	/	1	/	1	1	1	1	1	10 2	M. beel.
10.	912621104010	HARSHITHA P	II /CSE	1	1	1	1	1	1	1	1	1	/	10	Fahthe.
11.	912621104011	ISHWARYA S Dr. S.T	HILLAGARVATI	11∕м.в	.,øh.0	.,/	1	1	/	1	1	1	/		Birt

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12.	912621104012	JANANI R	II /CSE	1	1	1	1	1	1	1	1	1	1	10	P. Jane
13.	912621104015	LAVANYA S	II /CSE	a	a	1	1	1	1	1	/	1	/	08	S. Evolyn.
14.	912621104016	MAHASREE P	II /CSE	1	1	1	1	1	1	1	1	1	1	10	P. 1418
15.	912621104018	PRIYA M	II /CSE	1	1	1	1	1	1	1	1	1	/	10	M. Priga
16.	912621104019	RABIKA R	II /CSE	1	1	1	1	1	1	1	1	1	1	10	R-Ralph
17.	912621104021	SAHEENA BEGAM A	II /CSE	1	1	1	1	1	1	1	1	N		10	ScheunsbeganA
18.	912621104022	SASIPRIYA R	II /CSE	1	1	1	1	1	1	1	1	1	1	10	P. Shaminaj
19.	912621104023	SHAMIMA P	II /CSE	1	1	a	a	1	1	1	1	1	1	08	RSSi
20.	912621104024	SHEERA BANU A	II /CSE	1	1	1	1	1	1	1	1	1	1	10	Ai Amaly'.
21.	912621104025	SIVAJOTHIKA S	II /CSE	1	1	1	1	1	1	1	1	1	1	10	Prajothikas
22.	912621104026	SIVAPRIYA R	II /CSE	1	1	1	1	1	1	1	1	1	1	10	R. Snapinga
23.	912621104027	SUBHA DHARSHINI S	II /CSE	1	1	1	1	1	1	a	a	1	1	08	OSCALLY
24.	912621104028	SUBIKSHA S	II /CSE	1	1	1	1	1	1	1	1	(D)	LE)	LO	S. Sentula
25.	912621104029	VINITHA K	II /CSE	1	1	1	1	1	1	1	1	1	1	10	K-neniha
26.	912621104030	VISALATCHI S	II /CSE	1	1	1	,	1	1	1	1	1	1	LO	8 g°
27.	912621104301	VISHNAVI B	II /CSE	1	1	1	1	1	1	1	1	1	1	10	Caishna Di
28.	912621104302	VISHNUPRIYA A	II /CSE	1	1	1	1	1	1	1	1	1	1	10	A. Vishnipiya
29.	912621104701	AARTHI S	II /CSE	,	1	1	1	1	1	1	1	1	1	10	Sidadi

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30.	912621104702	SWATHI A.R	II /CSE	1	1	1	/	1	/	/	1	1	1	10	Eastline
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HOD / CSE SRI BHARATHI ENGINEERING **COLLEGE FOR WOMEN** KAIKKURICHI, PUDUKKOTTAI - 622 303

Dr. S.THILAGAVATHI M.E., Ph.D.,
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## Report on Value Added Course

Title:

Internet of Things with Python

Resource Person:

Resource Person:
Mr.M.Kamalakannan

Trainer

Galwin Technology

Date of conduct from:

22.08.2022

To: 26.08.2022

Duration:

30 Hours

Organized Department :

Computer Science and Engineering

Participant Year:

2

Semester:

**ODD** 

No. of Students Registered:

30

Venue:

Auditorium

### Outcome of Value Added Course (VAC)

### At the end of the VAC course the student can able to

- Explain fundamentals about IoT
- Illustration of IoT Access technologies
- Design methodology and different IoT hardware platforms.
- Identify with the application areas of IOT
- Realize the revolution of Internet in Mobile Devices, Cloud & Sensor Networks
- Describe the building blocks of Internet of Things and characteristics.

#### **Assessment Process**

- Students securing more than 60% 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)

VAC Coordinator

HoD CSE

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PUDUKKOTTAL DISTRICT

Dr. S.THILAGAVATHI M.E., Ph.D.,

PRINCIPAL

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KAIKKURICHI, PUDUKKOTTAI-622303



# Certificate of completion

### VALUE ADDED PROGRAM

This is to Certify that Mr/Ms. AARTHI.S of II CSE has successfully completed Value Added Course on "Internet of Things with Python" organized by the Department of Computer Science And Engineering in association with Galwin Technology from 22.08.2022 to 26.08.2022 during the academic year 2022-2023 [5 Days].

D.14

**Managing Director** Galwin Technology

SBECW

PRINCIPAL **SBECW** 

Dr. S.THILAGAVATHI M.E., Ph.D., PRINCIPAL



(Approved by AICTE | Affiliated to Anna University)

KAIKKURICHI, PUDUKKOTTAI-622303



# Certificate of completion

### VALUE ADDED PROGRAM

This is to Certify that Mr/Ms. AMEERA.M of II CSE has successfully completed Value Added Course on "Internet of Things with Python" organized by the Department of Computer Science And Engineering in association with Galwin Technology from 22.08.2022 to 26.08.2022 during the academic year 2022-2023 [5 Days].

Managing Divertor

Managing Director Galwin Technology

HoD/CSE SBECW

PRINCIPAL SBECW

Dr. S.THILAGAVATHI M.E., Ph.D.,

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(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING ACADEMIC YEAR 2022-2023 / ODD SEMESTER

Name of the Student :	Year/Sem:
AU Register Number:	
Value Added Course on "Inte	rnet of Things With Python"
MCQ QUESTIONS	5 (25X1 = 25 Marks)
1. Which of the following is false about IoT devi-	ces?
a) IoT devices use the internet for collecting and sharing data	c) IoT devices use wireless technology
b) IoT devices need microcontrollers	d) IoT devices are completely safe
2. Which of the following is not an IoT platform?	gammangon, acta v (s acta d
a) Amazon Web Services	c) Salesforce
b) Microsoft Azure	d) Flipkart
3. Which of the following is not an application of	FIoT?
a) BMP280	c) Smart city
b) Smart home	d) Self-driven cars
4. Which of the following is not a fundamental con	aponent of an IoT system?
a) Sensors	c) User interface
b) Connectivity and data processing	d) Transformer
5. Which layer is used for wireless connection in Io	oT devices?
a) Application layer	c) Data link layer
b) Network layer	d) Transport layer
6. Which of the following is false about the IoT co	mponents?
a) A light sensor (photoresistor) is an analog sensor	c) A push button is a digital sensor
b) A microphone is a digital sensor	d) A keyboard is a digital sensor
7. Which of the following is used to capture data to	from the physical world in IoT devices?
a) Sensors	c) Microprocessors
b) Actuators	d) Microcontrollers

8. Which of the following command is used to trigger the Amazon echo IOT device?

a) Hello

b) Suri

c) Alexa d) Hey

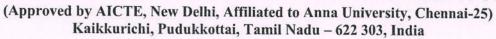
Dr. S.THILAGAVATHI M.E., Ph.D.,
PRINCIPAL

9. Which of the following is false about the MAN	NET IoT network?
a) It is a self-configuring network b) It has a low data rate	c) It doesn't have any encryption d) Power is readily available for complex security
10. Which of the following is not a sensor in IoT	?
a) BMP280 b) DHT11	c) Photoresistor d) LED
11. Which of the following is not an actuator in	Yame of the Student: SToI
<ul><li>a) Stepper motor</li><li>b) A fan</li></ul>	c) An LED d) Arduino
12. What is the use of PWM signals in IoT deve	elopment boards?
a) They are used by sensors to have analog input	c) They are used by actuators to have analog input
b) They are used by sensors to have digital input	d) They are used by actuators to have digital input
13. Which of the following is used to reprogram	n a Bootloader in IoT devices?
a) VHDL programming	c) ICSP
b) IDE	d) MANET
14. Which of the following is true about Arduin	no IoT devices?
<ul><li>a) They are open-source software</li><li>b) They can only read analog inputs</li></ul>	<ul><li>c) They have their own operating systems</li><li>d) They don't have pre-programmed firmware</li></ul>
15. How many number of elements in the Open	IoT Architecture?
a) 3 elements	c) 8 elements
b) 7 elements	d) 6 elements
16. IoT-A stands for	
a) Internet of Things Area	c) Internet of Things Address
b) Industrial of things Architecture	d) Internet of Things Architecture
17. Which of the following is not a feature of th	e Raspberry PI model B IoT device?
a) It has 256 MB SDRAM	c) It has its own operating system
b) It has a single USB connector	d) It has an Ethernet port
18. Which of the following processor is used in	the Raspberry PI 3 IoT device?
a) Broadcom BCM2711	c) Broadcom BCM2838
b) Broadcom BCM2837	d) Intel 8085
19. Which library is used to access I2C in Ardu	ino IoT devices?
a) EEPROM	c) DHT11
b) Wire	d) ArduinoJson

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<ul><li>20. Which of the following is not related to Ard</li><li>a) Serial monitor</li><li>b) Verify</li></ul>	uino IDE IoT software? c) Upload d) Terminate
<ul><li>21. Which of the following is a complete line of a) Belkin's WeMo</li><li>b) Cinder</li></ul>	home IoT devices that include smart switches? c) Awair d) Canary
IoT gateway must provide      a) Protocol abstraction     b) Data storage	c) Security with hardware d) Simple and fast installation
<ul><li>23. What IoT collects?</li><li>a) Device data</li><li>b) Machine generated data</li></ul>	c) Sensor data d) Human generated data
<ul><li>24. Which of the following protocol is used to line</li><li>a) HTTP</li><li>b) UDP</li></ul>	k all the devices in the IoT? c) Network d) TCP/IP
<ul><li>25. Which service permits the changes to the IoT</li><li>a) Update</li><li>b) Registered service status</li></ul>	services? c) Enable from suspension d) Enable
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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING ACADEMIC YEAR 2022-2023 / ODD SEMESTER

Value Added Course on "Internet of Things With Python"

### ANSWER KEY

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

VAC Coordinator

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# DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING ACADEMIC YEAR 2022-2023 / ODD SEMESTER

ACADEMIC YEAR 2022	2-2023 / ODD SEMESTER
Name of the Student: G. Faelwya	Year/Sem: 1 / 0 3
AU Register Number: 9126211040	
Value Added Course on "Inte	ernet of Things With Python"
MCQ QUESTIONS	S(25X1 = 25  Marks)
1. Which of the following is false about IoT devi	ices?
a) IoT devices use the internet for collecting and sharing data	c) IoT devices use wireless technology
b) IoT devices need microcontrollers	IoT devices are completely safe
2. Which of the following is not an IoT platform:	?
a) Amazon Web Services	c) Salesforce
b) Microsoft Azure	(d) Flipkart
3. Which of the following is not an application of	f IoT2
a) BMP280	
	c) Smart city
b) Smart home	d) Self-driven cars
4 100 1 61 611 1 1 1 1 1 1 1 1 1 1 1 1 1	dinerals a
4. Which of the following is not a fundamental con	nponent of an IoT system?
a) Sensors	c) User interface
b) Connectivity and data processing	(d) Transformer
5. Which layer is used for wireless connection in Io	oT devices?
a) Application layer	© Data link layer
b) Network layer	d) Transport layer
or behalf trover operating as stem	d) Transport layer
6. Which of the following is false about the IoT co	omponents?
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Sensors	c) Microprocessors
b) Actuators	d) Microcontrollers
8. Which of the following command is used to tri	iggor the America ask a IOT 1
a) Hello	
	Alexa
b) Suri	d) Hey
	HIM.E.,Ph.D.,
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SRI BHARATHI EN	GINEERING

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9. Which of the following is false about the MA	NET IoT network?
a) It is a self-configuring network	c) It doesn't have any encryption
b) It has a low data rate	d) Power is readily available for complex
b) it has a low data rate	security
7	security
10. Which of the following is not a sensor in IoT	7 133673340
a) BMP280	c) Photoresistor
b) DHT11	PODLED
0) 211111	
11. Which of the following is not an actuator in	n IoT?
a) Stepper motor	c) An LED
b) A fan	Arduino
Tuternet of Things With Pathon"	Leo semo 3 hobb/cuilaVera servera
12. What is the use of PWM signals in IoT dev	relopment boards?
a) They are used by sensors to have analog	They are used by actuators to have analog
input	input
b) They are used by sensors to have digital	d) They are used by actuators to have digital
input	input
	and sharing date
13. Which of the following is used to reprogram	
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b) IDE	d) MANET
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14. Which of the following is true about Ardui	
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a) 3 elements	c) 8 elements
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(10) //cicinents	d) o cicinents
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b) Industrial of things Architecture	(1) Internet of Things Architecture
total time (1972)	awel membershap to
17. Which of the following is not a feature of t	he Raspberry PI model B IoT device?
(a) It has 256 MB SDRAM	c) It has its own operating system
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A sea frameton se maturi mem Á i	
18. Which of the following processor is used in	n the Raspberry PI 3 IoT device?
(a) Broadcom BCM2711	c) Broadcom BCM2838
6) Broadcom BCM2837	d) Intel 8085
data diang diseptor appropriate for part such	7 - Wildelich all the following is used to existence
19. Which library is used to access I2C in Ard	
a) EEPROM	c) DHT11
(b) Wire	d) ArduinoJson
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20. Which of the following is not relate	ed to Arduino IDE IoT software?
a) Serial monitor	c) Upload
b) Verify	(d) Terminate
21. Which of the following is a comple (a) Belkin's WeMo b) Cinder	te line of home IoT devices that include smart switches?  c) Awair d) Canary
22. IoT gateway must provide	
a) Protocol abstraction	c) Security with hardware
Data storage	d) Simple and fast installation
23. What IoT collects?	
a) Device data	c) Sensor data
b) Machine generated data	d Human generated data
24. Which of the following protocol is a	used to link all the devices in the IoT?
a) HTTP	c) Network
b) UDP	(d) TCP/IP
25. Which service permits the changes	to the IoT services?
a) Update	(c) Enable from suspension
b) Registered service status	d) Enable

VAC Coordinator

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## DEPARTMENT OF COMPUTER SCEIENCE AND ENGINEERING

ACADEMIC YEAR 2022-2023 (ODD SEM)

### MARK SHEET FOR VALUE ADDED COURSE- INTERNET OF THINGS WITH PYTHON

	2025621404024	EVERVE	THE CAR	ATTENDAN	CE DETAILS	VAC-M	CQ TEST	OVERALL
S.NO	REG.NO	NAME OF THE STUDENT	YEAR/ BRANCH	No of Sessions Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	MARK(100) (50% of A + 50% of B)
1	912621104001	ABINAYA K	II /CSE	10	100	22	88	94
2	912621104002	AMEERA N	II /CSE	10	100	23	92	96
3	912621104003	ANJUGAM C	II /CSE	10	100	21	84	92
4	912621104004	ARUNDATHI S	II /CSE	10	100	19	76	88
5	912621104005	ASHIKA B	II /CSE	8	80	20	80	80
6	912621104006	DIVYA T	II /CSE	8	80	21	84	82
7	912621104007	ELACKIYA G	II /CSE	10	100	24	96	98

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912621104008	GAYATHRI K	II /CSE	10	100	21	84	92
912621104009	<b>GEETHA M</b>	II /CSE	10	100	22	88	94
912621104010	HARSHITHA P	II /CSE	10	100	21	84	92
912621104011	ISHWARYA S	II /CSE	10	100	23	92	96
912621104012	JANANI R	II /CSE	10	100	24	96	98
912621104015	LAVANYA S	II /CSE	8	80	21	84	82
912621104016	MAHASREE P	II /CSE	10	100	22	88	94
912621104018	PRIYA M	II /CSE	10	100	24	96	98
912621104019	RABIKA R	II /CSE	10	100	19	76	88
912621104021	SAHEENA BEGAM A	II /CSE	10	100	24	96	98
912621104022	SASIPRIYA R	II /CSE	10	100	19	76	88
912621104023	SHAMIMA P	II /CSE	8	80	23	92	86
912621104024	SHEERA BANU A	II /CSE	10	100	23	92	96
912621104025	SIVAJOTHIKA S	JI /CSE	10	100	20	80	90
	912621104009 912621104010 912621104011 912621104012 912621104015 912621104018 912621104019 912621104021 912621104022 912621104023	912621104009 GEETHA M  912621104010 HARSHITHA P  912621104011 ISHWARYA S  912621104012 JANANI R  912621104015 LAVANYA S  912621104016 MAHASREE P  912621104018 PRIYA M  912621104019 RABIKA R  912621104021 SAHEENA BEGAM A  912621104022 SASIPRIYA R  912621104023 SHAMIMA P  912621104024 SHEERA BANU A	912621104009 GEETHA M II /CSE  912621104010 HARSHITHA P II /CSE  912621104011 ISHWARYA S II /CSE  912621104012 JANANI R II /CSE  912621104015 LAVANYA S II /CSE  912621104016 MAHASREE P II /CSE  912621104018 PRIYA M II /CSE  912621104019 RABIKA R II /CSE  912621104021 SAHEENA BEGAM A II /CSE  912621104022 SASIPRIYA R II /CSE  912621104023 SHAMIMA P II /CSE  912621104024 SHEERA BANU A II /CSE	912621104009 GEETHA M II /CSE 10  912621104010 HARSHITHA P II /CSE 10  912621104011 ISHWARYA S II /CSE 10  912621104012 JANANI R II /CSE 10  912621104015 LAVANYA S II /CSE 8  912621104016 MAHASREE P II /CSE 10  912621104018 PRIYA M II /CSE 10  912621104019 RABIKA R II /CSE 10  912621104021 SAHEENA BEGAM A II /CSE 10  912621104022 SASIPRIYA R II /CSE 10  912621104023 SHAMIMA P II /CSE 8  912621104024 SHEERA BANU A II /CSE 10	912621104019 GEETHA M II /CSE 10 100  912621104010 HARSHITHA P II /CSE 10 100  912621104011 ISHWARYA S II /CSE 10 100  912621104012 JANANI R II /CSE 10 100  912621104015 LAVANYA S II /CSE 8 80  912621104016 MAHASREE P II /CSE 10 100  912621104018 PRIYA M II /CSE 10 100  912621104019 RABIKA R II /CSE 10 100  912621104021 SAHEENA BEGAM A II /CSE 10 100  912621104022 SASIPRIYA R II /CSE 10 100  912621104023 SHAMIMA P II /CSE 8 80  912621104024 SHEERA BANU A II /CSE 8 80	912621104019 GEETHA M II /CSE 10 100 22  912621104010 HARSHITHA P II /CSE 10 100 21  912621104011 ISHWARYA S II /CSE 10 100 23  912621104012 JANANI R II /CSE 10 100 24  912621104015 LAVANYA S II /CSE 8 80 21  912621104016 MAHASREE P II /CSE 10 100 22  912621104018 PRIYA M II /CSE 10 100 24  912621104019 RABIKA R II /CSE 10 100 24  912621104020 SAHEENA BEGAM A II /CSE 10 100 19  912621104021 SAHEENA BEGAM A II /CSE 10 100 19  912621104022 SASIPRIYA R II /CSE 10 100 19  912621104023 SHAMIMA P II /CSE 8 80 23  912621104024 SHEERA BANU A II /CSE 10 100 23	912621104009 GEETHA M II / CSE 10 100 22 88  912621104010 HARSHITHA P II / CSE 10 100 21 84  912621104011 ISHWARYA S II / CSE 10 100 23 92  912621104012 JANANI R II / CSE 10 100 24 96  912621104015 LAVANYA S II / CSE 8 80 21 84  912621104016 MAHASREE P II / CSE 10 100 22 88  912621104018 PRIYA M II / CSE 10 100 24 96  912621104019 RABIKA R II / CSE 10 100 24 96  912621104021 SAHEENA BEGAM A II / CSE 10 100 24 96  912621104021 SAHEENA BEGAM A II / CSE 10 100 24 96  912621104021 SAHEENA BEGAM A II / CSE 10 100 24 96  912621104022 SASIPRIYA R II / CSE 10 100 19 76  912621104023 SHAMIMA P II / CSE 8 80 23 92  912621104024 SHEERA BANU A II / CSE 10 100 23 92

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22	912621104026	SIVAPRIYA R	II /CSE	10	100	22	88	94
23	912621104027	SUBHA DHARSHINI S	II /CSE	8	80	23	92	86
24	912621104028	SUBIKSHA S	II /CSE	10	100	21	84	92
25	912621104029	VINITHA K	II /CSE	10	100	19	76	88
26	912621104030	VISALATCHI S	II /CSE	10	100	18	72	86
27	912621104301	VISHNAVI B	II /CSE	10	100	19	76	88
28	912621104302	VISHNUPRIYA A	II /CSE	10	100	21	84	92
29	912621104701	AARTHI S	II /CSE	10	100	18	72	86
30	912621104702	SWATHI A.R	II /CSE	10	100	19	76	88

Coordinator

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### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### **ACADEMIC YEAR 2022-2023 / EVEN SEMESTER**

Date: 24 / 1 /2023

### DEPARTMENT CIRCULAR

Certificate Course offered by the Department of CSE will be conducted for all final year CSE students on "Building Scalable Web application using Node JS" in our College campus. The classes will be held as per the schedule mentioned in the class time table. Certificates will be issued to all the participants at the end of the Course.

S.No.	Name of the Course	Resource Person
1	Building Scalable Web	Resource Person 1:
1.	application using Node JS	Mrs.Parveen Banu AP/CSE

CC:

· Principal's office

IQAC Coordinator

· Class In charges -IV Year

• CSE Students - IV Year

· Notice Board

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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING ACADEMIC YEAR 2022-2023 / EVEN SEMESTER

Certificate Course on "Building scalable web application using Node js"

### **SYLLABUS**

S.NO	TOPIC COVERED	DURATION (in hours)	DATE FN/AN
1	Introduction to web programming-Introduction to HTML	2	03.02.202
2	HTML Basic Formatting TagsHTML Images- HTML	2	10.02.202
3	Hyperlink-HTML Tables-HTML iFrame- HTML Form	2	17.02.202
4	HTML Headers-HTML Miscellaneous.	2	24.02.202
5	Getting Started with Angular - Angular Development Environment Setup	2	03.03.202
6	Creating Components and Modules - Templates – Directives	2	10.03.202
7	Data Binding – Pipes - Nested Components – Forms - Services – Routing	2	17.03.202
8	Node.js: Why and What Node.js - How to use Node.js - Create a web server in Node.js -Node Package Manager	2	24.03.202
9	Modular programming in Node.js - Restarting Node Application - File Operations	2	31.03.202
10	Express Development Environment - defining a route - Handling Routes - Route and Query Parameters - How Middleware works	2	15.04.202
11	Chaining of Middleware's - Types of Middleware's - connecting to MongoDB with Mongoose -	2	21.04.202
12	Validation Types and Defaults – Models	2	28.04.202
13	MongoDB: Introduction Module Overview- Document Database Overview- Understanding JSON	2	29.04.202
14	MongoDB Structure and Architecture- MongoDB Remote Management-	2	05.05.202
15	Installing MongoDB on the local computer (Mac or Windows)	2	12.05.202
	Total Hours:	30	

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# DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### **ACADEMIC YEAR 2022-2023 / EVEN SEMESTER**

Cerificate course on "Building scalable web application using Node js"

### STUDENTS PARTICIPATION LIST- CC PROGRAM

S.NO	REG.NO	NAME OF THE STUDENT	YEAR/BRANCH
1.	912619104001	ANNAPOORANI M	IV / CSE
2.	912619104003	ARUNNAVAMEENA A	IV / CSE
3.	912619104004	DAYANA P	IV / CSE
4.	912619104005	DHARSHINI D	IV / CSE
5.	912619104007	FAHMIDHA B	IV / CSE
6.	912619104009	GULNAS FATHIMA S	IV / CSE
7.	912619104010	HELAN J	IV / CSE
8.	912619104011	KEERTHANA R	IV / CSE
9.	912619104012	MUTHULAKSHMI G	IV / CSE
10.	912619104013	MUTHU MEENAKSHI M	IV / CSE
11.	912619104014	NIROSHIKA R	IV / CSE
12.	912619104017	PARAMESHWARI S	IV / CSE
13.	912619104019	RANJANI K	IV / CSE
14.	912619104020	RILWANA PARVEEN J	IV / CSE
15.	912619104021	ROOPINA R	IV / CSE
16.	912619104022	SANDHIYA B	IV / CSE
17.	912619104023	SANTHI D	IV / CSE
18.	912619104024	SARANYA C	IV / CSE

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19.	912619104027	SNEHA R	IV / CSE
20.	912619104029	SURIYA JOTHI S	IV / CSE
21.	912619104301	ABINAYA S	IV / CSE

CC Coordinator

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KAIKKURICHI,
PUDUKKOTTAI - 622 303

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### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### ACADEMIC YEAR 2022-2023 / EVEN SEMESTER

Certificate Course on "Building scalable web application using Node js"

S.NO	REG.NO	NAME OF THE STUDENT	YEAR/ BRANCH	3.2.23	10.2.23	17.2.23	24.2.23	3.3.23	10.3.23	17.3.23	24.3.23	31.3.23	NO OF HRS	SIGNATURE OF THE
	- Joint		1 1	2 hrs	2 hrs	2 hrs	2 hrs	2 hrs	2 hrs	2 hrs	2 hrs	2 hrs		STUDENT
1	912619104001	ANNAPOORANI M	IV / CSE	1	1	1	6	1	1	1	1	1	18	Saufe
2	912619104003	ARUNNAVAMEENA A	IV / CSE	C	1	^	1	-	1	,	1	1	18	Jornje
3	912619104004	DAYANA P	IV / CSE	r	,	1	,	^	1	,	1	1	18	Dayoy
4	912619104005	DHARSHINI D	IV / CSE	1	1	,	1	-	1	1	1	1	18	Our.
5	912619104007	FAHMIDHA B	IV / CSE	1	1	,	a	^	a	ſ	ſ	a	12	B- Ron
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### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### ACADEMIC YEAR 2022-2023 / EVEN SEMESTER

Certificate Course on "Building scalable web application using Node js"

S.NO	REG.NO	NAME OF THE STUDENT	YEAR/ BRANCH	15.4.23 2 hrs	21.4.23 2 hrs	28.4.23 2 hrs	29.4.23 2 hrs	5.05.23 2 hrs	12.5.23 2 hrs	NO OF SESSION ATTENDED	SIGNATURE OF THE STUDENT
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CC Coordinator

Dr. S.THILAGAVATHIM E., Ph.D.,
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# Report on Certificate Course

Title:

Building scalable web application using Node js"

Resource Person:

Resource Person:

Mrs.Parveen Banu

AP/CSE

Date of conduct from:

03.02.2023

To: 12.05.2023 Duration:

30 Hours

Organized Department:

Participant Year:

COMPUTER SCIENCE AND ENGINEERING

4 (CSE)

Semester:

**EVEN** 

No. of Students Registered:

21

Venue:

Lecture Hall 65

### Outcome of Certificate Course (CC)

### At the end of the CC course the student can able to

- Develop algorithmic solutions to simple computational problems.
- Develop and execute simple Full stack framework.
- Write simple Python programs using conditionals and loops for solving problems.
- Decompose a Python program into functions.

#### **Assessment Process**

- Students securing more than 60% on total score and secured more than 75% in attendance is eligible to receive the certificate for the CC course conducted
- Total Score = (0.5 \*Attendance in CC out of 100 percentage + 0.5 \*Test mark in CC out of 100 marks)

Coordinator

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN KAIKKURICHI, PUDUKKOTTAI - 622 303

Principal

PRINCI SRI BHARATHI ENGINEERI COLLEGE FOR WOMEN KAIKKURICHI - 622 303.

**PUDUKKOTTAI DISTRICT** 

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Kaikkurichi, Pudukkottai, Tamil Nadu – 622-303, India



# Certificate of Completion

This certificate is awarded to Ms.R.ROOPINA of IV CSE in recognition of their successful completion of certificate course on BUILDING SCALABLE WEB APPLICATION USING NODE JS during the academic year 2022-2023 even semester.

Course Coordinator

HoD / CSE

Principal

Dr. S.THILAGAVATHI M. B., Ph.D.

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Kaikkurichi, Pudukkottai, Tamil Nadu – 622-303, India



# Certificate of Completion

This certificate is awarded to Ms.S.ABINAYA of IV CSE in recognition of their successful completion of certificate course on BUILDING SCALABLE WEB APPLICATION USING NODE JS during the academic year 2022-2023 even semester.

Course Coordinator

HoD / CSE

Principal

Dr. S.THILL GOVATHI M.E., Ph.D.,

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# **ENGINEERING COLLEGE FOR WOMEN**

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# Certificate of Completion

This certificate is awarded to Ms.D.SANTHI of IV CSE in recognition of their successful completion of certificate course on BUILDING SCALABLE WEB APPLICATION USING NODE JS during the academic year 2022-2023 even semester.

Course Coordinator

HoD / CSE

Principal

Als.

Dr. S.THILAGAVATHI M.E., Ph.D.,

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Kaikkurchi - 622 303, Pudukkottai Dt.

Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India (Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

# DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

# ACADEMIC YEAR 2022-2023 / EVEN SEMESTER Certificate Course on "Building Scalable Web application using Node JS"

Name of the Student:

Year/Sem:

**AU Register Number:** 

## MCQ QUESTIONS (25X1 = 25 Marks)

1. Node.js is written in

A. JavaScript

B.C

C. C++

D. All of the above

2. Which of the following statement is correct?

A. is is Server Side Language.

B. js is the Client Side Language.

C. is is both Server Side and Client Side Language.

D. None of the above

3. What does the REPL stand for?

A. REPL stands for "Read Eval Print Loop."

B. REPL stands for "Research Eval Program Learn."

C. REPL stands for "Read Earn Point Learn."

D. REPL stands for "Read Eval Point Loop."

4. How modules in Node.js can be connected from one component to another?

A.Expose

B.Module

C.Exports

D.All of the above

5. Which of the below modules is not a built-in module in Node.js?

A.zlib

**B.HTTPS** 

C.dgram

D.fsread

6 Which of the below command will show all the modules installed locally?

A. npm ls -g

B .npm ls

C .node ls -g

D .node ls

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#### 7. Which of the below fs module is used to truncate a file?

A. fs.delete(fd, len, callback)

B.fs.remove(fd, len, callback)

C.fs.ftruncate(fd, len, callback)

D.None of the above.

### 8. How do we return a path string from the given path object in Node.js?

A.path.get()

B.path.set()

C.path.format()

D.path.return()

#### 9. What is the default scope in the Node.js application?

A.Global

B.Local

C.Global Function

D.Local to object

#### 10. Which of the below method is used to return the current working directory of the process?

A.cwd();

B.cmd();

C.pwd();

D . None of the above

#### 11. What does the fs module stand for?

A.FileStore

B .FileService

C.File System

D .None of the above

#### 12. Which of the below options is correct about package.json in the node.js application?

A.It is present in the root directory of any Node application.

B.It is used to define the properties of a package.

C.It is used to update the dependencies of an application.

D.All of the above.

#### 13. Which of the below is the correct syntax for installing the Nodemon in the Node.js application?

A. npm install -g nodemon

B. node install -g nodemon

C. node install node

D. node install -l nodemon

#### 14. Which of the following command is used to start a REPL session?

A.\$ node

B.\$ node start

C.\$ node repl

D.\$ node console

#### 15. In which language is Node.js written?

A. JavaScript

B. C

C. C++

D. CoffeeScript

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### 16 Which of the following command is used to install the Node.js express module?

A.\$ npm install express

B.\$ node install express

C.\$ install express

D. None of the above

#### 17. What is Callback?

- A. The callback is a technique in which a method calls back the caller method.
- B. The callback is an asynchronous equivalent for a function.
- C. Both of the above.
- D. None of the above.
- 18. Which of the following extension is used to save the Node.js files?

A. .js

B. .node

C. .java

D. .txt

19 The Node.js modules can be exposed using:

A.expose

B.module

C.exports

D. All of the above

20. Which of the following module is not a built-in node module?

A. zlib

B. https

C. dgram

D. fsread

21. Which node module is used to handle binary data?

A. binary

B. buffer

C. Cyrpto

D. dgram

22. How many node objects methods are available?

A. 21

B. 18

C. 19

D. 20

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23. Which of the following operations can we do with the NodeJS events module? A. Create B. Listen for D. All of the above C. Fire 24. Which of the following is a valid HTTP method? B. put A. get D. All of the above C. post 25. Which of the following NodeJS modules is used for file uploads? B. fs A. formidable D. files C. express Dr. S.THILAGAVATHI M.E. Ph.D., PRINCIPAL SRI BHARATHI ENGINEERING

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### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

#### ACADEMIC YEAR 2022-2023 / EVEN SEMESTER

Certificate course on "Building scalable web application using Node js"

### ANSWER KEY

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

CC Coordinator

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### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

DEFARIMENT OF COMPUTE	ER SCIENCE AND ENGINEERING
ACADEMIC YEAR 2022	-2023 / EVEN SEMESTER
Certificate course on "Building scala	
Name of the Student : D. Dhasskin	Year/Sem: V/08
AU Register Number: 412619104	
MCQ QUESTIONS	S(25X1 = 25  Marks)
1. Node.js is written in	(24/25.)
a) JavaScript b) C	c) C++ (d) All of the above
<ul><li>2. Which of the following statement is correct</li><li>(a) is is Server Side Language</li><li>b) is the Client Side Language</li></ul>	c) js is both Server Side and Client Side Language d) None of the above
3. What does the REPL stand for?  (a) REPL stands for "Read Eval Print Loop (b) REPL stands for "Research Eval Program (Learn."	c) REPL stands for "Read Earn Point Learn." d)REPL stands for "Read Eval Point Loop."
4. How modules in Node.js can be connected	from one component to another?
a)Expose b) Module	C) Exports d) All of the above
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a) zlib b) HTTPS	c) dgram d) fsread
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a)npm ls –g b) npm ls	node ls –g d) node ls
7. Which of the below fs module is used to truncate	e a file ?
a) fs.delete(fd, len, callback)	(c) fs.ftruncate(fd, len, callback)

Dr. S.THILAGAVATHI M.E., Ph.D.,

d) None of the above.

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b) fs.remove(fd, len, callback)

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8. How do we return a path string from the given path	object in Node.js?
a) path.get()	(c) path.format()
b) path.set()	d) path.return()
9. What is the default scope in the Node.js application	1?
a)Global	c) Global Function
(b) Local	d) Local to object
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10. Which of the below method is used to return the c	urrent working directory of the process?
(a) cwd();	c) pwd();
b) cmd();	d) None of the above
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11. What does the fs module stand for?	
a) FileStore	© File System
b) FileService	d) None of the above
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b) It is used to define the properties of a	d All of the above.
package.	
13. Which of the below is the correct syntax for insta	Illing the Nodemon in the Node.js application?
(a) npm install -g nodemon	c) node install node
b) node install -g nodemon	d) node install -l nodemon
14 While 64 6 Harden dia	A - DEDI
14. Which of the following command is used to start	
(a) \$ node	c) \$ node repl
b) \$ node start	d) \$ node console
15. In which language is Node.js written?	S. Which of the below modules is a
a) JavaScript	(c) C++
( b) C	d) CoffeeScript
16 Which of the following command is used to install	the Node.is express module?
(a) \$ npm install express	c) \$ install express
b) \$ node install express	d) None of the above
17 What is Callbook 9	
17. What is Callback?  a) The callback is a technique in which a	c) Both of the above.
method calls back the caller method.	C) Both of the doore.
(b) The callback is an asynchronous equivalent	d) None of the above.
for a function.	

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18.	Which of the following extension is used to save t	he Node.js files?
9	ā), js	c) .java
	b) node	d) .txt
197	The Node.js modules can be exposed using:	
	a) expose	exports
/	b) module	d) All of the above
	o) module	a) in or the doore
20.	Which of the following module is not a built-in n	ode module?
/1	a) zlib	c) dgram
	b) https	d) fsread
21.	Which node module is used to handle binary da	
//	a) binary	c) Cyrpto
0	(b))buffer	d) dgram
	22. How many node objects methods are available?	
/	a) 21	c) 19
(	0)18	d) 20
	~	
23.	Which of the following operations can we do wi	th the NodeJS events module?
/	a) Create	c) Fire
	b) Listen for	d All of the above
	1	
2/1	Which of the following is a valid HTTP method	9
Z4.	a) get	c) post
-	b) put	d) All of the above
	o) put	All of the above
25.	Which of the following NodeJS modules is used	for file uploads?
/	a) formidable	c) express
	(b) . fs	d) files
	O	

CC Coordinator

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### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING ACADEMIC YEAR 2022-2023 / EVEN SEMESTER

Certificate course on "Building scalable web application using Node js"

				ATTENDAN	CE DETAILS	VAC-M	CQ TEST	OVERALL
S.NO	REG.NO	NAME OF THE STUDENT	YEAR/ BRANCH	No of HRS Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	MARK(100) (50% of A + 50% of B)
1	912619104001	ANNAPOORANI M	IV / CSE	30	100	24	96	98
2	912619104003	ARUNNAVAMEENA A	IV / CSE	30	100	23	92	96
3	912619104004	DAYANA P	IV / CSE	30	100	22	88	94
4	912619104005	DHARSHINI D	IV / CSE	30	100	24	96	98
5	912619104007	FAHMIDHA B	IV / CSE	24	80	20	80	80
6	912619104009	GULNAS FATHIMA'S	IV / CSE	30	100	23	92	96

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7	912619104010	HELAN J	IV / CSE	30	100	21	84	92
8	912619104011	KEERTHANA R	IV / CSE	30	100	22	88	94 ,
9	912619104012	MUTHULAKSHMI G	IV / CSE	30	100	24	96	98
10	912619104013	MUTHU MEENAKSHI M	IV / CSE	30	100	23	92	96
11	912619104014	NIROSHIKA R	IV / CSE	30	100	25	100	100
12	912619104017	PARAMESHWARI S	IV / CSE	30	100	22 .	88	94
13	912619104019	RANJANI K	IV / CSE	30	100	23	92	96
14	912619104020	RILWANA PARVEEN J	IV / CSE	30	100	20	80	90
15	912619104021	ROOPINA R	IV / CSE	30	100	20	80	90
16	912619104022	SANDHIYA B	IV / CSE	30	100	21	84	92
17	912619104023	SANTHI D	IV / CSE	24	80	22	88	84
18	912619104024	SARANYA C	IV / CSE	30	100	23	92	96
19	912619104027	SNEHA R	IV / CSE	30	100	24	96	98
20	912619104029	SURIYA JOTHI S	IV / CSE	30	100	22	88	94

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21	912619104301	ABINAYA S	IV / CSE	30	100	25	100	100

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**COLLEGE FOR WOMEN** KAIKKURICHI,

PUDUKKOTTAI - 622 303



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### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### ACADEMIC YEAR 2022-2023 / EVEN SEMESTER

Date: 24 / 01 /2023

### DEPARTMENT CIRCULAR

Certificate Course offered by the Department of CSE will be conducted for all Second year and Third year CSE students on "Building Scalable Web application using Node JS" from 30.01.2023 to 03.02.2023. Certificates will be issued to all the participants at the end of the Course.

S.No.	Name of the Course	Resource Person
1.	Building Scalable Web application using Node JS	Resource Person 1:  Ms. EL.Thanga Uma AP / CSE  Resource Peron 2:  Ms.G.Rajalakshmi AP/CSE

CC:

· Principal's office

IQAC Coordinator

Class In charges – II, III Year

CSE Students - II, III Year

Notice Board

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### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### **ACADEMIC YEAR 2022-2023 / EVEN SEMESTER**

Certificate Course on "Building Scalable web applications using Node is"

### SVLLARUS

S.NO	TOPIC COVERED	DURATION (in hours)	DATE FN/AN	Resource Person
1	Introduction to web programming-Introduction to HTML-HTML Basic Formatting TagsHTML Images-HTML	3	30.01.2023	EL.Thanga Uma
2	Hyperlink-HTML Tables-HTML iFrame-HTML Form-HTML Headers-HTML Miscellaneous.	3	30.01.2023	G.Rajalakshmi
3	Getting Started with Angular - Angular Development Environment Setup - Creating Components and Modules	3	31.01.2023	EL.Thanga Uma
4	Templates – Directives - Data Binding – Pipes - Nested Components – Forms -Services – Routing	3	31.01.2023	G.Rajalakshmi
5	Node.js: Why and What Node.js - How to use Node.js - Create a web server in Node.js - Node Package Manager	3	01.02.2023	EL.Thanga Uma
6	Modular programming in Node.js - Restarting Node Application - File Operations	3	01.02.2023	G.Rajalakshmi
7	Express Development Environment - defining a route - Handling Routes - Route and Query Parameters - How Middleware works	3	02.02.2023	EL.Thanga Uma
8	Chaining of Middleware's - Types of Middleware's - connecting to MongoDB with Mongoose - Validation Types and Defaults – Models	3	02.02.2023	G.Rajalakshmi
9	MongoDB: Introduction Module Overview- Document Database Overview- Understanding JSON	3	03.02.2023	EL.Thanga Uma
10	MongoDB Structure and Architecture- MongoDB Remote Management- Installing MongoDB on the local computer (Mac or Windows)	3	03.02.2023	G.Rajalakshmi
	Total Hours:	30	7	

Coordinator

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# DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### ACADEMIC YEAR 2022-2023 / EVEN SEMESTER

Certificate Course on "Building scalable web application using Node js"

STUDENT PARTICIPATION LIST-CC PROGRAM

S.NO	REG.NO	NAME OF THE STUDENT	YEAR/BRANCH
1	912620104001	AKALYA S	III / CSE
2	912620104002	HEMA V	III / CSE
3	912620104004	KALAIVANI S	III / CSE
4	912620104005	KALPANA K	III / CSE
5	912620104007	MEIYYAMMAL M	III / CSE
6	912620104008	NANDHINI P	III / CSE
7	912620104009	PRASANNA DEVI P	III / CSE
8	912620104010	PRISHIYA E	III / CSE
9	912620104012	ROSAMMAL M	III / CSE
10	912620104013	ROSHIKA K	III / CSE
11	912620104014	SABHA AYSHA S	III / CSE
12	912620104015	SATHIYASRI P	III / CSE
13	912620104016	SIVAGAMI D	III / CSE
14	912620104017	SIVAHARINI S	III / CSE
15	912620104018	SUBASHINI C	III / CSE
16	912620104019	SUBASHINI M	III / CSE
17	912620104020	SWETHA D	III / CSE
18	912620104021	VANATHI T	III / CSE
19	912620104022	VINCIYA MARY S	III / CSE
20	912620104304	VAISHNAVI R	III / CSE

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21	912621104001	ABINAYA K	II / CSE
22	912621104002	AMEERA N	II / CSE
23	912621104003	ANJUGAM C	II / CSE
24	912621104004	ARUNDATHI S	II / CSE
25	912621104005	ASHIKA B	II / CSE
26	912621104006	DIVYA T	II / CSE
27	912621104007	ELACKIYA G	II / CSE
28	912621104008	GAYATHRI K	II / CSE
29	912621104009	<b>GEETHA M</b>	II / CSE
30	912621104010	HARSHITHA P	II / CSE
31	912621104011	ISHWARYA S	II / CSE
32	912621104012	JANANI R	II / CSE
33	912621104015	LAVANYA S	II / CSE
34	912621104016	MAHASREE P	II / CSE
35	912621104018	PRIYA M	II / CSE
36	912621104019	RABIKA R	II / CSE
37	912621104021	SAHEENA BEGAM A	II / CSE
38	912621104022	SASIPRIYA R	II / CSE
39	912621104023	SHAMIMA P	II / CSE
40	912621104024	SHEERA BANU A	II / CSE
41	912621104025	SIVAJOTHIKA S	II / CSE
42	912621104026	SIVAPRIYA R	II / CSE
43	912621104027	SUBHA DHARSHINI S	II / CSE
44	912621104028	SUBIKSHA S	II / CSE
45	912621104029	VINITHA K	II / CSE
46	912621104030	VISALATCHI S	II / CSE
47	912621104301	VAISHNAVI .B	II / CSE

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48	912621104302	VISHNU PRIYA. A	II / CSE
49	912621104701	AARTHI. S	II / CSE
50	912621104702	SWATHI. A.R	II / CSE

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Kaikkurchi - 622 303, Pudukkottai Dt.



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#### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

#### ACADEMIC YEAR 2022-2023 / EVEN SEMESTER

Certificate course on "Building Scalable web application using Node js"

S.NO	REG.NO	NAME OF THE	YEAR/	1	ATE 01.23		TE 01.23		TE 2.23		TE 2.23		TE 2.23	NO OF SESSIONS	SIGNATURE OF THE	
		STUDENT	BRANCH	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	ATTENDED	STUDENT	
1	912620104001	AKALYA S	III / CSE	1	1	1	1	1	/	1	,	1	1	10	S. Abalya.	
2	912620104002	HEMA V	III / CSE	1	1	1	,	/	,	1	1	1	1	10	Hu	
3	912620104004	KALAIVANI S	III / CSE	1	1	1	1	,	,	1	,	,	,	10	isaling	
4	912620104005	KALPANA K	III / CSE	1	1	1	1	,	/	1	,	,	,	10	Kalpanan.	
5	912620104007	MEIYYAMMAL M	III / CSE	1	,	a	a	1	1	1	,	,	,	08	- polykany	
6	912620104008	NANDHINI P	III / CSE	1	1	1	1	1	1	1	1	,	1	10	Nint	
7	912620104009	PRASANNA DEVI P	III / CSE	1	1	1	1	,	,	1	1	1	,	10	brasand	
8	912620104010	PRISHIYA E	III / CSE	1	1	1	1	/	,	1	,	)	1	10	Davolupic	
9	912620104012	ROSAMMAL M	III / CSE	1	1	1	1	1	1	1	,	,	1	10	Poseno.	
10	912620104013	ROSHIKA K	III / CSE		1	(	1	1	/	1	1	1	1	10	Roshi ha	

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11	912620104014	SABHA AYSHA S	III / CSE	1	1	1	1	1	1	1	1	1	1	(10	S. Sohnel
12.	912620104015	SATHIYASRI P	III / CSE	_	1	1	1	1	1	1	1	1	1	10	Sout
13	912620104016	SIVAGAMI D	III / CSE	,	1	1	1	1	1	1	1	1	1	10	Duy
14	912620104017	SIVAHARINI S	III / CSE	1	, ,	1	1	1	-1	,	1	1	1	10	Bary
15	912620104018	SUBASHINI C	III / CSE	1	1	1	1	1	,	1	1	1	1	10	Bubai
16	912620104019	SUBASHINI M	III / CSE	1	1	1	1	1	1	1	5	1	/	10	Mark
17	912620104020	SWETHA D	III / CSE	a	a	1	1	1	1	1	1	1	1	08	Quothy
18	912620104021	VANATHI T	III / CSE	1	1	1	1	1	,	,	1	1	1	10	1. Vant
19	912620104022	VINCIYA MARY S	III / CSE	1	1	1	1	1	,	,	,	1	1	(0	Vine
20	912620104304	VAISHNAVI R	III / CSE	,	1	1	1	1	1	1	1	(	1	[0	Voich
21	912621104001	ABINAYA K	II / CSE	,	1	1	1	1	1	1	-	1	,	.0	Ahre
22	912621104002	AMEERA N	II / CSE	1	1	1	1		1	,	,	,	1	(10	Amorre
23	912621104003	ANJUGAM C	II / CSE	,	1		,	1	r	1	1	1	1	[0	
24	912621104004	ARUNDATHI S	II / CSE	,	1	1	1	1	,	1	1	1	1	10	Arundalla
25	912621104005	ASHIKA B	II / CSE	,	,	1	1	-	1	1	1	1	1	10	Ashika
26	912621104006	DIVYA T	II / CSE	/	1	1	1	1	1	1	1	1	1	10	DO.
27	912621104007	ELACKIYA G	II / CSE	1	1	1	1		1	1	1	_	1	10	ELeckys
28	912621104008	GAYATHRI K	II / CSE	,	1		,	^	,	1	,	,	1	10	Derens

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29	912621104009	<b>GEETHA M</b>	II / CSE	1	1	1	1	1	1	1	1	1	1	10	Greethe.
30	912621104010	HARSHITHA P	II / CSE	1	1	1	1	10	1	1	1	1	1	10	PHanh
31	912621104011	ISHWARYA S	II / CSE	1	1	11/11	1	1	1	1	1	/	1	10	STSAM.
32	912621104012	JANANI R	II / CSE	1	1	M	10	1	1	1	1	1	1	LO	Janani R
33	912621104015	LAVANYA S	II / CSE	1	1	1	1	1	1	1	1	1	1	10	8. Lavanyo
34	912621104016	MAHASREE P	II / CSE	1	1	a	a	1	1	1	1	1	1	08	Mahasses
35	912621104018	PRIYA M	II / CSE	1	1	1	1	1	1	1	1	1	1	LO	Rus.
36	912621104019	RABIKA R	II / CSE	1	1	1	1	1	1	1	1	/	1	10	Rah.
37	912621104021	SAHEENA BEGAM A	II / CSE	(	1	1	1	1	1	1	1	1	1	00	3 ahr
38	912621104022	SASIPRIYA R	II / CSE	1	1	1	1	1	1	1	1	1	1	Ю	Beary!
39	912621104023	SHAMIMA P	II / CSE	1	1	1	1	1	1	1	1	1	1	10	Sisha
40	912621104024	SHEERA BANU A	II / CSE	1	1	1	1	1	1	1	1	1	1	10	ty.
41	912621104025	SIVAJOTHIKA S	II / CSE	1	1	1	1	1	1	1	/	1	1	10	2
42	912621104026	SIVAPRIYA R	II / CSE	1	1	1	1	1	1	1	1	1	1	10	SPN
43	912621104027	SUBHA DHARSHINI S	II / CSE	1	1	1	1	/	1	1	1	1	1	10	Dw!
44	912621104028	SUBIKSHA S	II / CSE	1	1	1	1	1	1	1	1	1	1	10	Soll
45	912621104029	VINITHA K	II / CSE	1	1	1	1	1	1	1	1	1	1	10	Van
46	912621104030	VISALATCHI S	II / CSE	/	1	1	HIL		1	,	1	,	1	10	A. O.

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47	912621104301	VAISHNAVI .B	II / CSE	1	1	1	1	1	1	1	1	1	/	10	Vary
48	912621104302	VISHNU PRIYA. A	II / CSE	1	1	1	1	1	1	1	1	1		10	Phosprya
49	912621104701	AARTHI. S	II / CSE	1	1	1	1	1	1	1	1	1	1	10	Long
50	912621104702	SWATHI. A.R	II / CSE	1	1	1	1	1	1	1	1	1	1	LO	Office.

CC Coordinator

HoD / CSE

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Dr. S.THILAGAVATHI M.E., Ph.D.,
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#### **Report on Certificate Course**

Title: Building Scalable web application using Node js

Resource Person: Resource Person 1: Resource Peron 2: Ms. EL.Thanga Uma Ms.G.Rajalakshmi

AP/CSE AP/CSE

Date of conduct from : | 30.01.2023 | To: | 03.02.2023 | Duration: | 30 Hours

Organized Department: COMPUTER SCIENCE AND ENGINEERING

Participant Year: 2,3 (CSE) Semester: EVEN No. of Students Registered: 50

Venue: Auditorium, II Floor

#### **Outcome of Cetificate Course (CC)**

#### At the end of the Certificate course the student can able to

- Develop algorithmic solutions to simple computational problems.
- Develop and execute simple Full stack framework.
- Write simple Python programs using conditionals and loops for solving problems.
- Decompose a Python program into functions.

#### **Assessment Process**

- Student securing more than 60% on total score and secured more than 75% in attendance is eligible to receive the certificate for the CC course conducted
- Total Score = (0.5 \*Attendance in CC out of 100 percentage + 0.5 \*Test mark in CC out of 100 marks)

VAC Coordinator

HoD/CSE

Principal

HOD / CSE

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PUDUKKOTTAI DISTRICT

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## SRI BHARATHI

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Kajkkurichi, Pudukkottai, Tamil Nadu – 622-303, India



# Certificate of Completion

This certificate is awarded to Ms.D.SWETHA of III CSE in recognition of their successful completion of certificate course on BUILDING SCALABLE WEB APPLICATION USING NODE JS during the academic year 2022-2023 even semester.

Course Coordinator

HoD / CSE

Principal

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# Certificate of Completion

This certificate is awarded to Ms.M.GEETHA of II CSE in recognition of their successful completion of certificate course on BUILDING SCALABLE WEB APPLICATION USING NODE JS during the academic year 2022-2023 even semester.

Course Coordinator

HoD / CSE

Principal

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## SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

Kaikkurichi, Pudukkottai, Tamil Nadu – 622 303, India (Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)

#### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

# ACADEMIC YEAR 2022-2023 / EVEN SEMESTER Certificate Course on "Building Scalable Web application using Node JS"

Name of the Student:

Year/Sem:

**AU Register Number:** 

#### MCQ QUESTIONS (25X1 = 25 Marks)

1. Node.js is written in

A. JavaScript

B.C

C. C++

D. All of the above

2. Which of the following statement is correct?

A. is is Server Side Language.

B. js is the Client Side Language.

C. is is both Server Side and Client Side Language.

D. None of the above

3. What does the REPL stand for?

A. REPL stands for "Read Eval Print Loop."

B. REPL stands for "Research Eval Program Learn."

C. REPL stands for "Read Earn Point Learn."

D. REPL stands for "Read Eval Point Loop."

4. How modules in Node.js can be connected from one component to another?

A.Expose

B.Module

C.Exports

D.All of the above

5. Which of the below modules is not a built-in module in Node.js?

A.zlib

**B.HTTPS** 

C.dgram

D.fsread

6 Which of the below command will show all the modules installed locally?

A. npm ls -g

B .npm ls

C .node ls -g

D .node ls

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#### 7. Which of the below fs module is used to truncate a file?

A. fs.delete(fd, len, callback)

B.fs.remove(fd, len, callback)

C.fs.ftruncate(fd, len, callback)

D.None of the above.

#### 8. How do we return a path string from the given path object in Node.js?

A.path.get()

B.path.set()

C.path.format()

D.path.return()

#### 9. What is the default scope in the Node.js application?

A.Global

B.Local

C.Global Function

D.Local to object

#### 10. Which of the below method is used to return the current working directory of the process?

A.cwd();

B.cmd();

C.pwd();

D . None of the above

#### 11. What does the fs module stand for?

A.FileStore

B .FileService

C.File System

D .None of the above

#### 12. Which of the below options is correct about package.json in the node.js application?

A.It is present in the root directory of any Node application.

B.It is used to define the properties of a package.

C.It is used to update the dependencies of an application.

D.All of the above.

#### 13. Which of the below is the correct syntax for installing the Nodemon in the Node.js application?

A. npm install -g nodemon

B. node install -g nodemon

C. node install node

D. node install -l nodemon

#### 14. Which of the following command is used to start a REPL session?

A.\$ node

B.\$ node start

C.\$ node repl

D.\$ node console

#### 15. In which language is Node.js written?

A. JavaScript

B. C

C. C++

D. CoffeeScript

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#### 16 Which of the following command is used to install the Node.js express module?

A.\$ npm install express

B.\$ node install express

C.\$ install express

D. None of the above

#### 17. What is Callback?

- A. The callback is a technique in which a method calls back the caller method.
- B. The callback is an asynchronous equivalent for a function.
- C. Both of the above.
- D. None of the above.
- 18. Which of the following extension is used to save the Node.js files?

A. .js

B. .node

C. .java

D. .txt

19 The Node.js modules can be exposed using:

A.expose

B.module

C.exports

D. All of the above

20. Which of the following module is not a built-in node module?

A. zlib

B. https

C. dgram

D. fsread

21. Which node module is used to handle binary data?

A. binary

B. buffer

C. Cyrpto

D. dgram

22. How many node objects methods are available?

A. 21

B. 18

C. 19

D. 20

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23. Which of the following operations can we do with the NodeJS events module?

A. Create
B. Listen for
C. Fire
D. All of the above

24. Which of the following is a valid HTTP method?

A. get
B. put

25. Which of the following NodeJS modules is used for file uploads?

A. formidable

B. fs

C. express

C. post

D. files

D. All of the above

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#### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

#### **ACADEMIC YEAR 2022-2023 / EVEN SEMESTER**

Certificate Course on "Building scalable web application using Node js"

#### **ANSWER KEY**

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

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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022	2-2023 / EVEN SEMESTER
Certificate Course on "Building scala	
Name of the Student: K. Kalpana	Year/Sem: 111 /06.
AU Register Number: 912 6 2010	4005
MCQ QUESTIONS	S(25X1 = 25  Marks)
1. Node, js is written in	((0,0))
a) JavaScript b) C	c) C++ d) All of the above
2. Which of the following statement is correct a) is is Server Side Language	c) js is both Server Side and Client Side
b) js is the Client Side Language	Language d) None of the above
3. What does the REPL stand for?  (a) REPL stands for "Read Eval Print Loop  b) REPL stands for "Research Eval Program Learn."	c) REPL stands for "Read Earn Point Learn." d)REPL stands for "Read Eval Point Loop."
4. How modules in Node.js can be connected	from one component to another?
a)Expose b) Module	c) Exports d) All of the above
5. Which of the below modules is not a built-in	n module in Node.js ?
a) zlib b) HTTPS	c) dgram d) fsread
6 Which of the below command will show all the m	iodules installed locally ?
a)npm ls –g b) npm ls	c) node ls -g d) node ls
7. Which of the below fs module is used to truncate	e a file ?
a) fs.delete(fd, len, callback) b) fs.remove(fd, len, callback)	c) fs.ftruncate(fd, len, callback) d) None of the above.
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8. How do we return a path string from the given	path object in Node.js?
a) path.get() b) path.set()	c) path.format() d) path.return()
9. What is the default scope in the Node.js applic	eation?
a)Global b) Local	<ul><li>c) Global Function</li><li>d) Local to object</li></ul>
10. Which of the below method is used to return	the current working directory of the process?
(a) cwd(); b) cmd();	<ul><li>c) pwd();</li><li>d) None of the above</li></ul>
11. What does the fs module stand for?	
a) FileStore b) FileService	c) File System d) None of the above
<ul><li>12. Which of the below options is correct about a) It is present in the root directory of any N application.</li><li>b) It is used to define the properties of a package.</li></ul>	
37000 Mirgo, 10071 (10	installing the Nodemon in the Node.js application
a) npm install -g nodemon b) node install -g nodemon	c) node install node d) node install -l nodemon
14. Which of the following command is used to	o start a REPL session?
(a) \$ node b) \$ node start	c) \$ node repl d) \$ node console
15. In which language is Node.js written?	
a) JavaScript b) C	c) C++ d) CoffeeScript
16 Which of the following command is used to	install the Node.js express module?
(a) \$ npm install express b) \$ node install express	c) \$ install express d) None of the above
a) node is	
<ul><li>17. What is Callback?</li><li>a) The callback is a technique in which a method calls back the caller method.</li></ul>	c) Both of the above.
b) The callback is an asynchronous equival for a function.	ent d) None of the above.

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a) .js b) .node	c) .java d) .txt
19 The Node.js modules can be exposed usin a) expose b) module	g:  (c) exports (d) All of the above
<ul><li>20. Which of the following module is not a beautiful a) zlib</li><li>b) https</li></ul>	c) dgram d fsread
21. Which node module is used to handle to binary buffer	c) Cyrpto d) dgram
22. How many node objects methods are a a) 21 b) 18	vailable? c) 19 d) 20
<ul><li>23. Which of the following operations can value</li><li>a) Create</li><li>b) Listen for</li></ul>	we do with the NodeJS events module?  c) Fire  d) All of the above
<ul><li>24. Which of the following is a valid HTTP a) get</li><li>b) put</li></ul>	method? c) post d) All of the above
25. Which of the following NodeJS module a) formidable b) fs	s is used for file uploads? c) express d) files
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18. Which of the following extension is used to save the Node.js files?



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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

#### ACADEMIC YEAR 2022-2023 / EVEN SEMESTER

Certificate Course on "Building scalable web application using Node js"

	100	The second second		ATTENDAN	CE DETAILS	VAC-M	CQ TEST	OVERALL
S.NO	REG.NO	NAME OF THE STUDENT	YEAR/ BRANCH	No of Sessions Attended	Attendance Mark(100) (A)	No of Correct Answers	MCQ Mark(100) (B)	MARK(100) (50% of A + 50% of B)
1	912620104001	AKALYA S	III / CSE	10	100	21	84	92
2	912620104002	HEMA V	III / CSE	10	100	18	72	86
3	912620104004	KALAIVANI S	III / CSE	10	100	19	76	88
4	912620104005	KALPANA K	III / CSE	10	100	20	80	90
5	912620104007	MEIYYAMMAL M	III / CSE	8	80	21	84	82
6	912620104008	NANDHINI P	III / CSE	10	100	23	92	96
7	912620104009	PRASANNA DEVI P	III / CSE	10	100	24	96	98
8	912620104010	PRISHIYA E	III / CSE	10	100	22	88	94

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9	912620104012	ROSAMMAL M	III / CSE	10	100	24	96	98
10	912620104013	ROSHIKA K	III / CSE	10	100	19	76	88
11	912620104014	SABHA AYSHA S	III / CSE	10	100	22	88	94
12	912620104015	SATHIYASRI P	III / CSE	10	100	23	92	96
13	912620104016	SIVAGAMI D	III / CSE	10	100	24	96	98
14	912620104017	SIVAHARINI S	III / CSE	10	100	21	84	92
15	912620104018	SUBASHINI C	III / CSE	10	100	19	76	88
16	912620104019	SUBASHINI M	III / CSE	10	100	17	68	84
17	912620104020	SWETHA D	III / CSE	8	80	24	96	88
18	912620104021	VANATHI T	III / CSE	10	100	22	88	94
19	912620104022	VINCIYA MARY S	III / CSE	10	100	24	96	98
20	912620104304	VAISHNAVI R	III / CSE	10	100	21	84	92
21	912621104001	ABINAYA K	III / CSE	10	100	20	80	90
22	912621104002	AMEERA N	III / CSE	10	100	24	96	98
23	912621104003	ANJUGAM C	II / CSE	10	100	25	100	100

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912621104004	ARUNDATHI S	II / CSE	10	100	18	72	86
912621104005	ASHIKA B	II / CSE	10	100	23	92	96
912621104006	DIVYA T		10	100	17	68	84
912621104007	ELACKIYA G		10	100	24	96	98
912621104008	GAYATHRI K		10	100	23		96
912621104009	<b>GEETHA M</b>	Al Vacas	10	100	24	96	98
912621104010	HARSHITHA P	III WEE	10	100	24	MA	98
912621104011	ISHWARYA S	B ( C/C)	10	100	23	84 /	96
912621104012	JANANI R		10	100	24	- ino	98
912621104015	LAVANYA S		10	100	21	90	92
912621104016	MAHASREE P		8	80	22	88	84
912621104018	PRIYA M		10	100	23	38	96
912621104019	RABIKA R		10	100	22	- 24	94
912621104021	SAHEENA BEGAM A		10	100	24	80	- 88
912621104022	SASIPRIYA R	II / CSE	10	100	23	92	92
	912621104006  912621104007  912621104008  912621104009  912621104010  912621104011  912621104015  912621104016  912621104019  912621104019	912621104005 ASHIKA B  912621104006 DIVYA T  912621104007 ELACKIYA G  912621104008 GAYATHRI K  912621104009 GEETHA M  912621104010 HARSHITHA P  912621104011 ISHWARYA S  912621104012 JANANI R  912621104015 LAVANYA S  912621104016 MAHASREE P  912621104018 PRIYA M  912621104019 RABIKA R  912621104021 SAHEENA BEGAM A	912621104005   ASHIKA B   II / CSE     912621104006   DIVYA T   II / CSE     912621104007   ELACKIYA G   II / CSE     912621104008   GAYATHRI K   II / CSE     912621104009   GEETHA M   II / CSE     912621104010   HARSHITHA P   II / CSE     912621104011   ISHWARYA S   II / CSE     912621104012   JANANI R   II / CSE     912621104015   LAVANYA S   II / CSE     912621104016   MAHASREE P   II / CSE     912621104018   PRIYA M   II / CSE     912621104019   RABIKA R   II / CSE     912621104021   SAHEENA BEGAM A   II / CSE     912621104022   SASIPRIYA R   II / CSE	912621104005   ASHIKA B   II / CSE   10     912621104006   DIVYA T   II / CSE   10     912621104007   ELACKIYA G   II / CSE   10     912621104008   GAYATHRI K   II / CSE   10     912621104009   GEETHA M   II / CSE   10     912621104010   HARSHITHA P   II / CSE   10     912621104011   ISHWARYA S   II / CSE   10     912621104012   JANANI R   II / CSE   10     912621104015   LAVANYA S   II / CSE   10     912621104016   MAHASREE P   II / CSE   8     912621104018   PRIYA M   II / CSE   10     912621104019   RABIKA R   II / CSE   10     912621104021   SAHEENA BEGAM A   II / CSE   10     912621104022   SASIPRIYA R   10	III/CSE	II / CSE	III/CSE

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39	912621104023	SHAMIMA P	II / CSE	10	100	24	96	98
18 1	912621104024	SHEERA BANU A	II / CSE	10	100	19	76	88
40	912621104025	SIVAJOTHIKA S	II / CSE	10	100	18	72	86
41	912621104026	SIVAPRIYA R	II / CSE	10	100	24	96	98
42	912621104027	SUBHA DHARSHINI S	II / CSE	10	100	21	84	92
43	912621104028	SUBIKSHA S	II/CSE	10	100	22	88	94
44	912621104029	VINITHA K	II/CSE	10	100	22	88	94
45	912621104030	VISALATCHI S	II / CSE	10	100	23	92	96
46	912621104301	VAISHNAVI .B	II / CSE	10	100	24	96	98
47	912621104011	VISHNU PRIYA. A	II / CSE	10	100	21	84	92
48	912621104302	MARSHITHA P	II / CSE	10	100	24	96	98
49	912621104701	AARTHI. S		10	100	24	96	98
50	912621104702	SWATHI. A.R	II / CSE	10	100	37	85	- 60

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Criteria 2

**Teaching-Learning and Evaluation** 

350

**Key Indicator- 2.3. Teaching- Learning Process (40)** 

2022-2023

# COMPUTER SCIENCE AND ENGINEERING

# PARTICIPATIVE LEARNING CONFERENCE AND SYMPOSIUM



### SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

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<u>DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING</u>

<u>PARTICIPATIVE LEARNING (SYMPOSIUM/WORKSHOP/SEMINAR)</u>

#### ACADEMIC YEAR (2022 - 2023)

S.No	Register No	Student Name	Year/Sem	Name of the Participative Learning Method	
1.	912620104018	C.Subhashini	IIIAI	F - Consumation   Land	
2.	912620104017	S.Sivaharini	III/V	Symposium - Paper Presentation	
3.	912620104016	D.Sivagami	Linuage C	(KRCE)	
4.	912620104010	E.Prishiya	— III/V	5(8)8(10)38(10) (6)3 (6)3	
5.	912620104014	S.Sabha Aysha	III/V	Symposium – Capture Flag (SEC)	
6.	912620104005	K.Kalpana	101(38)5452 %	M. M. OEGO OEGO CALL	
7.	912620104019	M.Subashini	Permittin 7.1	Symposium -	
8.	912620104022	S.Vinciya Mary	III/V	Paper Presentation	
9.	912620104009	P.Prasanna Devi	Table 118	(SEC)	
10.	912620104019	M.Subashini			
11.	912620104022	S.Vinciya Mary	ALCOHOLD D	The property of the property o	
12.	912620104002	V.Hema	III/V	Symposium – Clear the Red	
13.	912620104009	P.Prasanna Devi	THI V	(SEC)	
14.	912620104005	K.Kalpana		No. of the contract of the con	
15.	912620104018	C.Subashini	III/ VI	Symposium - Superficio (ACGCET)	
16.	912620104009	P.Prasanna Devi	III/V	Symposium – Cyber Ethnicit (MZCET)	
17.	912620104014	S.Sabha Aysha	加维尔全民国人民	Symposium – Poster	
18.	912619104001	M.Annapoorani	III/ VI	Presentation (SEC)	
19.	912619104001	M.Annapoorani	***************************************	Symposium - Copy cat	
20.	912619104023	D.Santhi	IV/ VIII	(SEC)	
21.	912620104014	S.Sabha Aysha	III/ VI	Symposium - Paper	
22.	912619104001	M.Annapoorani		Presentation	
23.	912619104023	D.Santhi	IV/ VIII	(SEC)	
24.	912619104005	D.Dharshini		V	
25.	912619104010	J.Helan	-		
26.	912619104011	R.Keerthana			
27.	912619104013	M.Muthu Meenakshi		Symposium - Paper	
28.	912619104019	K.Ranjani	IV/ VIII	Presentation	
29.	912619104021	R.Roopina	DE STAIL VE	(MAIET)	
30.	912619104027	R.Sneha	Wagnes -	(WAILI)	
31.	912619104301	S.Abinaya	100		
32.	912620104018	C.Subashini	111/371	٨٨	
		C.CdCdSHIIII	III/ VI		

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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### PARTICIPATIVE LEARNING (SYMPOSIUM/WORKSHOP/SEMINAR)

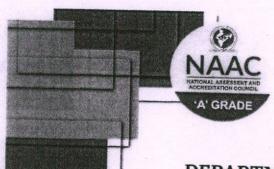
33.	912619104005	D.Dharshini	IV/ VIII	Symposium - Paper Presentation (SRRCET)	
34.	912619104005	D.Dharshini			
35.	912619104019	K.Ranjani		Symposium - QUIZ	
36.	912619104012	G.Muthulakshmi	IV/ VIII	(SRRCET)	
37.	912619104017	S.Parameshwari	- Initiapidus G	1 8 REPORT (12 12 12 12 12 12 12 12 12 12 12 12 12 1	
38.	912619104001	M.Annapoorani	137/37111	Symposium – Thought	
39.	912619104023	D.Santhi	IV/ VIII	Presenter	
40.	912620104002	V.Hema	. L evidentia	4. 942620304040	
41.	912620104018	C.Subashini		namentoria 2	
42.	912620104014	S. Sabha Aysha	III/ VI	P P I D M D J C A I L L L L L L L L L L L L L L L L L L	
43.	912620104019	M.Subashini	craspan M		
44.	912620104304	R.Vaishnavi	midandak.M		
45.	912619104003	A.Arunnavameena	er i malinary on yes		
46.	912619104004	P.Dayana	riol) massanS.4	International Conference -	
47.	912619104007	B.Fahmidha	doubestink	Paper Presentation	
48.	912619104009	S.Gulnas Fathima	turis acide sid	(SRRCET)	
49.	912619104010	J.Helan	IV/ VIII	- Pouroincacke (1)	
50.	912619104011	R.Keerthana	manial A	- 144 953620104005	
51.	912619104014	R.Niroshika		THE PROPERTY OF THE PARTY OF TH	
52.	912619104017	S.Parameshwari	TO TO THE PROPERTY.	n nagentalisable (C. 1911)	
53.	912619104021	R.Roopina			
54.	912619104027	R.Sneha	Figure 12-4	s community is at	
55.	912619104001	M.Annapoorani	ellert ediak a	Suprajounce   Tillia	
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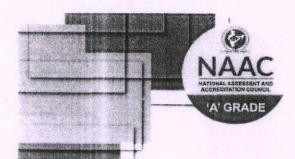
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ECEntra'22 – National Level workshop & Technical symposium organized by Department of ECE held on 24 <sup>th</sup> September 2022 at K.Ramakrishnan College of Engineering, Trichy.  Dr. S.THILAGAVATHI M.E., Ph. D.  PRINCIPAL  SRI BHARATHI ENGINEERINDT. D.Srinivasan  COLLEGE FOR WOMEN  Kalkkurchi - 622 303, Pudukkottai Dt.  PRINCIPAL





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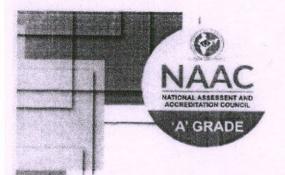
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from SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN has presented
a paper entitled MOBILE COMPUTING
in
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by Department of ECE held on 24 <sup>th</sup> September 2022 at K.Ramakrishnan
College of Engineering, Trichy.
Mr. S. THILAGAVATHIME TO Smini kasun
Dr. M.Maheswari  SRI BHARATHI ENGINEER Dr. D. Srinivasan
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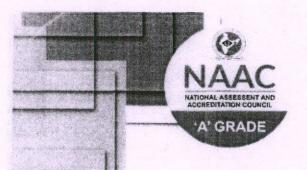


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ECEntra'22 – National Level workshop & Technical symposium organized by Department of ECE held on 24<sup>th</sup> September 2022 at K.Ramakrishnan

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Titled Internet of Things Architecture in the
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C simpostant Technol edita 2022 neta on 01" June 2022, conducted by the Department Of
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This is to certify that Mr/Ms
Sti. Bhatathi. Engineeting College for Women has participated and presented a paper Titled Virtual Artificial Intelligence in the
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Titled. BE.AUT.Y. PARADISE. THE COSMETIC CENTRE in the
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OF SRI BHARATHI ENGINEERING COLLEGIE FOR WOMEN! Has Participated/Win In PAPER PREBENTATION ( 111 rd place) Event

Conducted By The Department Of Computer Science Engineering In TECHNOPHILIA - 2K23 A National Level Technical Symposium

On 28th April 2023.

Dr. S.THILAGAVATHI M.E., Ph.D.,

SRI BHARATHI ENGINEERING **COLLEGE FOR WOMEN** 

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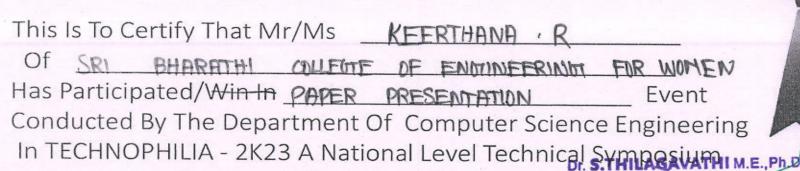




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Dr. S.THILAGAVATHI M.E., Ph.D.,

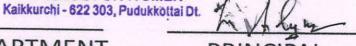
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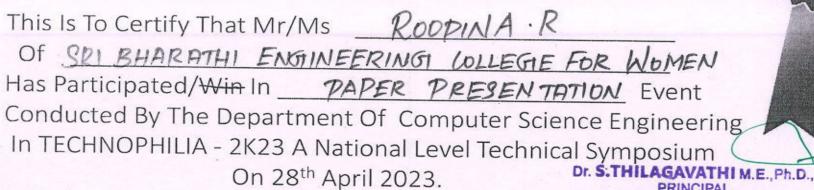




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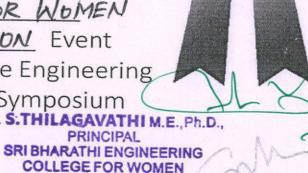


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Of SRI BHARATHI ENDINEERING COLLEGE FOR WOMEN Has Participated/Win In PAPER PRESENTATION [III M prize] Event Conducted By The Department Of Computer Science Engineering In TECHNOPHILIA - 2K23 A National Level Technical Symposium

On 28th April 2023.

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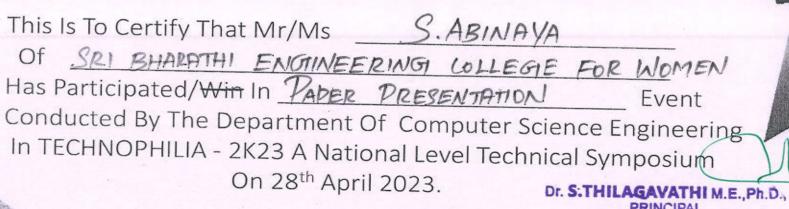
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Of SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

Has Participated/Win In CONNECTION COMPETITION [11 Prize Event Conducted By The Department Of Computer Science Engineering

In TECHNOPHILIA - 2K23 A National Level Technical Symposium

On 28th April 2023.

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#### A NATIONAL LEVEL TECHNICAL SYMPOSIUM

TECHSAT 23

CERTIFICATE OF MERIT

Mr/Ms/Mrs D. Dharshini CSE (IV Year)

SBECW Has Participate In The Event Paper Pre

In The National Level Technical Symposium TECHSAT '23 Held On 20th March 2023.

Organized By The Department of EEE.

Dr. S.THILAGAVATHI M.E., Ph.

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#### A NATIONAL LEVEL TECHNICAL SYMPOSIUM

TECHSAT '23

CERTIFICATE OF MERIT

Mr/Ms/Mrs. Dharshini of BECIA Has Participate In The Event. Tech Ruiz.

In The National Level Technical Symposium TECHSAT '23 Held On 20th March 2023

Organized By The Department of EEE.

Dr. S.THILAGAVATHI M.E., Ph.D.,

Mob

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## TECHSAT 23

CERTIFICATE OF MERIT

Mr/Ms/Mrs K. RANIANI SBE.CW Has Participate In The Event Technical Quitz In The National Level Technical Symposium TECHSAT '23 Held On 20th March 2023 Organized By The Department of EEE.



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## TECHSAT '23

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Mr/Ms/Mrs Parameswart. 8
SBECW Has Participate In The Event Tech Quiz

In The National Level Technical Symposium TECHSAT '23 Held On 20th March 2023

Organized By The Department of EEE.

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Kaikkurchi - 622 303, Pudukkottai Dt.

Dr. S.THILAGAVATHI M.E., Ph.D.,















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CERTIFICATE OF MERIT

Mr/Ms/Mrs Q Muthulakshmi  SBECH. Has Participate In The Event Tech Quiz	0
SBECH. Has Participate In The Event Tech Quiz	

In The National Level Technical Symposium TECHSAT '23 Held On 20th March 2023'

Organized By The Department of EEE.

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AND
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This is to certify that Mr/Ms...ANNA. POORANT. M....SRI...B.HARATHI. ENGINEERING. COLLEGIE FOR WOMEN...has participated and Secured I / II prize in Copy cat / Hashcrack / Thought presenter / Poster Presentation / Short flim / Meme Contest / Mr.Bean game in the National Level Technical Symposium "TechnoPedia 2023" held on 29th April 2023, conducted by the Department Of Computer Science and Engineering, Shanmuganathan Engineering College, Arasampatti, Pudukkottai Dist.

HOD-CSE

Dr. S.THILAGAVATHI M.E., Ph. D.
PRINCIPAL
SRI BHARATHI ENGINEERING

COLLEGE FOR WOMEN Kaikkurchi - 622 303, Pudukkettai Dt.



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(ICETEECT'23)

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> Dr.A.ELANGO Principal



Dr. S.THILAGAVATHI M.E., Ph.D

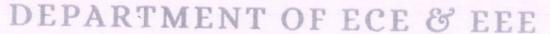
Dr.S.SUBBIA HRIBHARATHI ENGINEERING
Advisor COLLEGE FOR WOMEN

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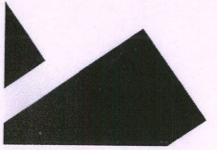
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SRI BHARATHI ENGINEERING

Dr.S.SUBBIAH COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt.

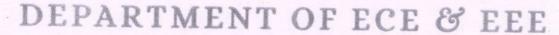
Advisor

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This is to certify that Prof./Dr./Mr./Ms. M. SUBASHINI CSE . THIRD YEAR has presented a Paper entitled ... F-VOTING SYSTEM USING ETHEREUM NETWORK ... In the International Conference on "Emerging Trends in Electrical Electronics & Communication Technology" held on 20th April 2023,Organized by the Department Of Electrical Electronics & Communication Engineering, Sri Raaja Raajan College Of Engineering And Technology, Karaikudi.

Dr.A.ELANGO Principal



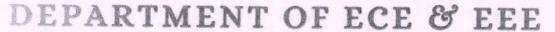


Dr.S.SUBBIAHSRIBHARATHIENGINEERING COLLEGE FOR WOMEN Advisor



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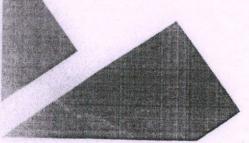
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Kaikkurchi - 622 303, Pudukko a Dt.



Dr.A.ELANGO Principal





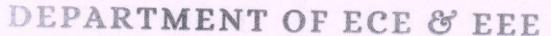
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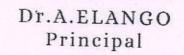
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This is to certify that Prof./Dr./Mr./Ms... R.: VAISHNAVI has presented a Paper entitled ... ANDROID. APP. FOR. WOMEN. SAFETY In the International Conference on "Emerging Trends in Electrical Electronics & Communication Technology" held on 20th April 2023, Organized by the Department Of Electrical Electronics & Communication Engineering, Sri Raaja Raajan College Of Engineering And Technology, Karaikudi.





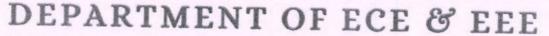
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This is to certify that Prof./Dr./Ms... ARUNNAVA MEENA . A has presented a

Paper entitled EVENT OF SAFETY VIOLATION DETECTION IN INDUSTRIAL.... In the International Conference on Emerging Trends in Electrical Electronics & Communication Technology held on 20th April 2023, Organized by the Department Of Electrical Electronics & Communication Engineering, Sri Raaja Raajan College Of Engineering And Technology, Karaikudi.

> Dr.A.ELANGO Principal



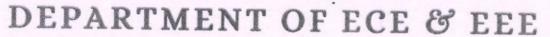


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Dr. S.THILAGAVATHEM.E.,PH.D.

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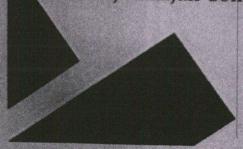
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This is to certify that Prof./Dr./Mr./Ms. B. FAHMIDHA, IV-YEAR (CSE) has presented a Paper entitled. Down second Loaning Lochnique. In the International Conference on Emerging Trends in Electrical Electronics & Communication Technology held on 20th April 2023, Organized by the Department Of Electrical Electronics & Communication Engineering Sri Raaja Raajan College Of Engineering And Technology, Karaikudi.



Dr.A.ELANGO Principal



Dr.S.SUBBIA

S.THILAGAVATHIME PH.

Dr. S. SUBBIAH COLLEGE FOR WOMEN

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> Dr.A.ELANGO Principal



ATHEME PHO

Dr.S.SUBBIAH COLLEGE FOR WO (aikkurchi - 622 303, Pudukkot

Advisor





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This is to certify that Prof / Dr / Mr / Ms ] HELAN - B.E (CSE) - FINAL YEAR has presented a Paper entitled with Faulat Explosion for retraplegia in the International users using deep tagging. In the International explosion for telraplegia ... In the International users using deep Landing ... In the International Conference on Emerging Trends in Electrical Electronics & Communication Technology held on 20th April 2023, Organized by the Department Of Electrical Electronics & Communication Engineering, Sri Raaja Raajan College Of Engineering And Technology, Karaikudi.

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Dr.S.SUBBIAH Advisor

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> Dr.A.ELANGO Principal

\*

Dr.S.SUBBIAH Advisor

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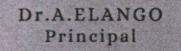
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BRI BHARATHI ENGINEERING

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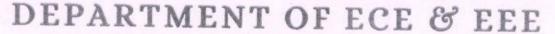
Dr.S.SUBBIAH urchi-622 303, Pudukkottai Dr.

Advisor



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(ICETEECT'23)

CERTIFICATE OF PARTICIPATION

Paper entitled **EVENT...OF.** SAFETY. **VIOLATION. DETECTION.IN. INDUSTIRIAL.....** In the International Conference on "Emerging Trends in Electrical Electronics & Communication Technology" held on

20th April 2023,Organized by the Department Of Electrical Electronics & Communication Engineering,

Sri Raaja Raajan College Of Engineering And Technology, Karaikudi.

Mrs.k.Isabella Rani.M.E., Conveiner



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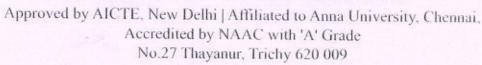
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### CERTIFICATE OF PARTICIPATION

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Mr/Ms

#### **MANNAPOORANI**

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#### SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

Has Presented Paper Entitled as

Plant Disease Prediction Using Neural Network

Dr. S.THILAGAVATHI M.E., Ph.D.,

SRIBHARATHI ENGINEERING COLLEGE FOR WOMEN

in the "International Conference on Information and Communication Engineering

(ICICE'23) organized by Department of Electronics and Communication Engineering at

CARE College of Engineering during 27 & 28 April, 2023.

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Has Presented Paper Entitled as

Ai Enhanced Ot Security Tool

Dr. S.THILAGAVATHI ME.,Ph.D.,

SRIBHARATHI ENGINEERING COLLEGE FOR WOMEN

in the "International Conference on Information and Communication Engineering

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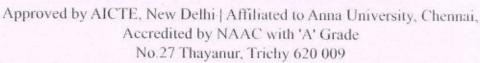
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