KANDULA SRINIVASA REDDY MEMORIAL COLLEGE OF ENGINEERING (AUTONOMOUS)

KADAPA-516003. AP

(Approved by AICTE, Affiliated to JNTUA, Ananthapuramu, Accredited by NAAC)

(An ISO 9001-2008 Certified Institution)

DEPARTMENT OF ARTIFICIAL INTELLIGENCE & MACHINE LEARNING



VALUE ADDED COURSE

ON

"IOT with Python programming"

Resource Persons : Smt. O.Divya, Dept. of AI&ML, Mr. J.Sunil, Dept. of AI&ML KSRMCE

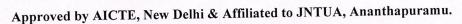
Course Coordinator: Smt. O.Divya, Dept. of AI&ML, KSRMCE

Duration: 19/01/2023 to 04/02/2023



(UGC-AUTONOMOUS)

Kadapa, Andhra Pradesh, India-516 003



An ISO 14001:2004 & 9001: 2015 Certified Institution



Lr./KSRMCE/AIML/2022-23/

Date: 10-01-2023

To The Principal, KSRMCE, Kadapa.

Respected Sir,

Sub: Permission to Conduct Value Added Course on "IOT with Python Programming" from 19/01/2023 to 04/02/2023-Req- Reg.

The Department of Artificial Intelligence & Machine Learning is planning to offer a Value-Added Course on "IOT with Python Programming" to B. Tech. students. The course will be conducted from 19/01/2023 to 04/02/2023. In this regard, I kindly request you to grant permission to conduct Value Added Course.

Thanking you sir,

Submitted stu,

Yours faithfully

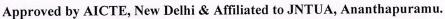
(Smt. O. Divya, Asst. Professor in AI&ML)

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Cr./KSRMCE/AIML/2022-23/

Date: 11/01/2023

Circular

The Department of Artificial Intelligence & Machine Learning is offering a Value-Added Course on "IOT with Python Programming" from 19/01/2023 to 04/02/2023 to B. Tech students. In this regard, interested students are requested to register their names for the Value-added Course with Course Coordinator.

https://forms.gle/2TyPdEtvuJk53Rfq9

For further information contact Course Coordinator.

Course Coordinator: Smt. O. Divya, Assistant Professor, Dept. of AI&ML.-KSRMCE. Contact No: 9398011747

Dept. of AIML

Dr. K. SRINIVASA RAO, M.Tech., Ph.D. Professor & HOD AIML K.S.R.M. College of Engineering (Autonomous) KADAPA- 516 005. (A.P.)

Cc to:

IQAC-KSRMCE

Registration for Value Added Course on MIT App Inventor from 19/01/2023 to 04/02/2023

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4.	Department * Mark only one oval.	
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KSRM College of Engineering(A), Kadapa Rgistered lis for VAC on IoT with Python Programming

Timestamp	Name	ROLL NO	DEPARTMENT	College Email
	CHEKKA VENKATA JE		AIML	229y5a3901@ksrmce.ac.in
1-10-2023 17:12:30	BOJANAPALLI SAI PA	229y5a0503	CSE	229y5a0503@ksrmce.ac.in
1-10-2023 17:39:44	Saad	219y1a3952	Aiml	219y1a3952@ksrmce.ac.in
1-10-2023 18:44:25	A.Rushi kesava Reddy	219y1a0507	Cse	219y1a0507@ksrmce.ac.in
1-10-2023 19:13:12	Santhosh Reddy	219y1a3912	AI ML	219y1a3912@ksrmce.ac.in
1-10-2023 19:26:38	KOTLO DHANUSH	229y5a3903	AI&ML	229y5a3903ksrmce.ac.in
1-11-2023 10:16:32	Y.DILEEP KASI	229y5a3907	AI&ML	229y5a3907@ksrmce.ac.in
1-11-2023 12:23:17	Tamatam Janardhan R	219y1a05h3	Cse	219y1a05h3@ksrmce.ac.in
1-11-2023 13:29:51	Polisetty kalyani	229y5a0513	Cse c	229y5a0513@ksrmce.ac.in
1-11-2023 13:40:03	D.Mahindra	219y1a0536	Cse	219y1a0536@ksrmce.ac.in
1-11-2023 13:43:35	H.V.SIVA KUMAR	219y1a0564	CSE	219y1a0564@ksrmce.ac.in
1-11-2023 13:44:59	G.shanmukha datta red	219y1a0559	Cse	219y1a0559@ksrmce.ac.in
1-11-2023 13:48:33	P. Rasoolbee	219y1a05c7	Cse	219y1a05c7@ksrmce.ac.in
1-11-2023 13:51:07	P.babjan	219y1a05c8	Cse	219y1a05c8@ksrmce.ac.in
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1-11-2023 16:18:59		219y1a05h9	CSE	219y1a05h9@ksrmce.ac.in
1-11-2023 16:32:49	T.shanmukha sai	229y5a0517	CSE	2295a0517@ksrmce.ac.in
1-11-2023 18:52:43	P. Somalatha	219y1a05d1	Cse	219y1a05d1@ksrmce.ac.in
1-11-2023 19:13:46	M.Venkata Sai Nikhil	219Y1A05A2	CSE	219y1a05a2@ksrmce.ac.in
1-11-2023 20:30:09	Mannaji asif	219Y1A05A8	Cse	219y1a05a8@ksrmce.ac.in
1-11-2023 20:49:59	B.Gowthami	219y1a0517	CSE	219y1a0517@ksrmce.ac.in
1-11-2023 21:46:31	Nalipi Sridhar Reddy	219Y1A3933	AI&ML	219y1a3933@ksrmce.ac.in
1-12-2023 1:35:39	B.jagadeeswarreddy	219y1a0513	Cse A/s	219y1a0513@ksrmce.ac.in
1-12-2023 9:18:59	D.Balaji	219Y1A0533	CSE	219y1a0533@ksrmce.ac.in
1-12-2023 16:29:56	B. Sree Harshitha	219y1a0516@	Cse	219y1a0516@ksrmce.ac.in
1-13-2023 6:30:25		229y5a3907	AIML	229y5a3907@ksrmce.ac.in
1-13-2023 8:47:54	BOJANAPALLI SAI PA	229y5a0503	CSE	229y5a0503@ksrmce.ac.in
1-13-2023 19:17:15		219y1a0504	CSE	219y1a0504@ksrmce.ac.in
1-14-2023 12:20:48	Chennavenkatesh	219y1a3909	AI&ML	219y1a3909@ksrmce.ac.in

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1-18-2023 13:51:12	C Sathya Chakradhar	219y1a0520	CSE	219y1a0520@ksrmce.ac.in
1-18-2023 13:54:01	G. Sivashailaja	219y1a0551	Cse	219y1a0551@ksrmce.ac.in
1-18-2023 13:54:21	Bonala Venkateswarlu	219y1a0514	Cse	219y1a0514@ksrmce.ac.in
1-18-2023 15:13:05	V S MANJUNATH	229Y5A3904	AI & ML	229y5a3904@ksrmce.ac.in
1-18-2023 15:13:47	Y DILEEP	229y5a3907	AI & ML	229y5a3907@ksrmce.ac.in
1-18-2023 15:13:53	Y.HEMANTH KUMAR	229y5a3906	AI&ML	229y5a3906@ksrmce.ac.in
1-18-2023 18:00:13	N. Vasavi	219y1a3935	Ai&ml	219y1a3935@ksrmce.ac.in
1-18-2023 18:59:18	E.Suryaprakash	219y1a0545	CSE-A	29y1a0545@ksrmce.ac.in
1-19-2023 8:57:16	Sharath Kumar Reddy	219y1a3902	Ai&ml	219y1a3902@ksrmce.ac.in
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1-19-2023 15:42:58	S. Hemanth kumar	219y1a3955	AI&ML	219y1a3955@ksrmce.ac.in
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1-19-2023 17:11:58	M.hemalathq	219y1a05b0	Cse	219y1a05b0@ksrmce.ac.in
1-19-2023 17:11:58	YERRA HEMANTH KU	229y5a3906	AI&ML	229y5a3906@ksrmce.ac.in
1-19-2023 17:11:58	DILEEP KASI	229y5a3907	AL&ML	229y5a3907@ksrmce.ac.in
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1-19-2023 18:11:58	D.pavithra	219Y1A0534	CSE	219Y1A0534@ksrmce.ac.ir
1-19-2023 18:11:58	Chinthaginjala Induvad	219y1a0525	CSE	219y1a0525@ksrmce.ac.in
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1-19-2023 19:11:58		219y1a3914	Aiml	219y1a3943@ksrmce.ac.in

Co-ordinate

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Professor & HOD AIML
K.S.R.M. College of Engineering
(Autonomous)
KADAPA- 516 005. (A.P.)

Course Syllabus for VAC on IoT with Python Programming

Internet of Things with Python Programming

Course Objectives:

- Learn the basic python programming.
- Understand Raspberry Pi hardware and its relevant software.
- Gain knowledge to verity working of simple sensor circuits with Raspberry Pi.
- Understand the internet of Things.

Course Outcomes:

The students will be able to:

- Learn the python programming language and IDE
- Prototype circuit and connect them to the Raspberry Pi
- Program the Raspberry Pi board to make the circuits work
- Analyze the internet of things

UNIT 1:

Introduction- History, Features, setting up path, working with Python, Basic Syntax, Variable and Data Types. Operator; Conditional Statements-if, If-else, Nested if-else; Looping- For A while. Nested loops; Control Statements-Break, Continue, Pass; String Manipulation-Accessing Strings. Basic Operations, String slices.

UNIT 2:

Function and Methods; lists-Introduction, accessing list, Operations, working with lists, Function and Methods; Tuple-Introduction, Accessing tuples, Operations, Working, Functions and Methods.

UNIT 3:

Dictionaries-Introduction, accessing values in dictionaries, working with dictionaries, Properties, Functions; Function- Defining a function, calling a function, Types of functions, Function Arguments, Anonymous functions, Global and local variables.

UNIT4:

Modules-Importing module, Math module, Random module, different type of Packages, Composition; Input- Output- Printing on screen, reading data from keyboard, Opening and closing file, Reading and writing files. Functions.

UNIT 5: The Raspberry Pi and its uses

Introduction (Video), Raspberry Pi Board (Updated), Raspberry Pi Processor, Raspberry Pi vs. Arduino (Updated), Operating System Benefits, Processors, Raspberry Pi IoT, Raspberry Pi Setup. Raspberry Pi Configuration, Overclocking (Updated)

Introduction (Video), General Purpose IO Pins, Protocol Pins, GPIO Access, General purpose IO Pins. Pulse Width Modulation, Demo of a Blink, Graphic User Interface, Tkinter Library, Interaction.

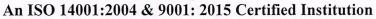
References:

- 1. The internet of Things by Samuel Greengard
- 2. The fourth industrial revolution by Klaus Schwab
- 3. Getting started with the internet of things by Cuno Pfister



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Kadapa, Andhra Pradesh,India - 516003 Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.





<u>Department of Artificial Intelligence & Machine Learning</u> <u>Value added Course on IOT with python programming</u> <u>Schedule</u>

S.	Date	Time Resource Person		Topic
No				
1	19/01/2023	4PM to6PM	Smt. O. Divya	Introduction- History, Features, setting up path, working with Python, Basic Syntax, Variable and Data Types
2	20/01/2023	4PM to6PM	Smt. O. Divya	Operator, Conditional Statements-if, Ifelse, Nested if-else, Looping- For A while. Nested loops, Control Statements-Break, Continue, Pass, String Manipulation-Accessing Strings. Basic Operations, String slices.
3	21/01/2023	4PM to6PM	Smt. O. Divya	Function and Methods; lists-Introduction, accessing list, Operations, working with lists, Function and Methods; Tuple-Introduction
4	23/01/2023	4PM to6PM	Smt. O. Divya	Accessing tuples, Operations, Working, Functions and Methods.
5	24/01/2023	4PM to6PM	Smt. O. Divya	Dictionaries-Introduction, accessing values in dictionaries, working with dictionaries, Properties, Functions
6	25/01/2023	2PM to6PM	Smt. O. Divya	Modules-Importing module, Math module, Random module
7	27/01/2023	2PM to6PM	Smt. O. Divya	Different type of Packages, Composition; Input
8	28/01/2023	4PM to6PM	Smt. O. Divya	Output- Printing on screen, reading data from keyboard, Opening and closing file, Reading and writing files. Functions.
9	30/01/2023	4PM to6PM	Smt. O. Divya	Introduction (Video), Raspberry Pi Board (Updated), Raspberry Pi Processor, Raspberry Pi vs. Arduino (Updated)
10	31/01/2023	3PM to6PM	Smt. O. Divya	Operating System Benefits, Processors,

				Raspberry Pi IoT, Raspberry Pi Setup. Raspberry Pi Configuration, Overclocking (Updated)
11	01/02/2023	4PM to6PM	Mr. J. Sunil	Introduction (Video), General Purpose IO Pins, Protocol Pins, GPIO Access, General purpose IO Pins.
12	02/02/2023	4PM to6PM	Mr. J. Sunil	Pulse Width Modulation, Demo of a Blink
13	03/02/2023	4PM to6PM	Mr. J. Sunil	Graphic User Interface, Tkinter Library, Interaction.
14	04/02/2023	4PM to6PM	Mr. J. Sunil	Demo Projects

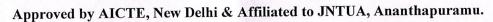
Coordinator

HoD/AIML
Dr. K. SRINIVASA RAO, M. Tech., Ph.D.
Professor & HOD AIML
K.S.R.M. College of Engineering
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DEPARTMENT OF AI&ML

Attendance sheet of Certification Course on "IOT with Python Programming" From 19/01/2023 to 04/02/2023

Sl. No.	Roll No.	Name	19/01	20/01	21/01	23/01	24/01	25/01	27/01	28/01	30/01	31/01	01/02	02/02	03/02	04/02
1	229y5a3901	CHEKKA VENKATA JEEVAN KUMAR	an	a	A	Ly-	A.	for	ar	LA	her	Les	La	La	La	4
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3	219y1a3952	Shaik Saad	Sand	2nd	Sue	Carl	Gud	Sand	Carol	Soul	Soud	Good	Soud	Cand	Good	Soud
4	219y1a0507	A. Rushi Kesava Reddy	ww	Rows	Rus	Kell	Susc	Kus	Russ	Rus	Jam	Sulv	Jan	SOLM	Jum	Jun
5	219y1a3912	Santhosh Reddy	Parl	Soul	Cand	Sout	Cons	Sal	Sout	Soril	Sint	Saint	Cont	Qui	Sout	Som
6	229y5a3903	KOTLO DHANUSH	Jours	Pours	Panul	Davy	Panul	Donul	2 Pany	Jamo	Tours	Jami	four	Jam	land	Pours

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50	219y1a3914	G. Nikhitha	Garel	GIN	Gr. Asitta	GP NIKE	CI.	Signal Co	G; KL	Gill	G. MIN	D'A	Cikh	Rik	GO XI	G'ails
51	219y1a3914	P.pochamma	Pir	Pir	P.~	Pir	P.s	P.y	P.5	P-J	PJ	Por	Pir	Pr	P.y	P. jr.
52	219y1a0536	D.Mahindra	P. maninge	Pinani doe	D. mændes	P. mainder	provau	D Mahini	D. Mohiusy	Bamonen	Domark	Proi 4	Dmm	D. M	D. Mahi	D. navi

O: Dime

Coordinator

HoD

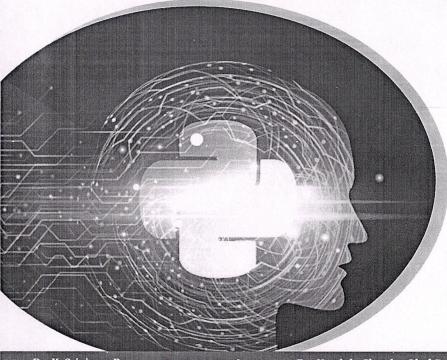
Dr. K. SRINIVASA RAO, M.Tech., Ph.D.
Professor & HOD AIML
K.S.R.M. College of Engineering
(Autonomous)
KADAPA- 516 055. (A.P.)



(UGC - Autonomous)
Kadapa, Andhra Pradesh, India- 516 005
Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.



Value Added Course on "Internet of Things with Python Programming"











Resource Persons

Coordinator

AI & ML

Python Programming Lab (Al 207)

19-01-2023 to 04-02-2023

4 pm to 6 pm

Smt. O. Divya & Sri J. Sunil

Smt. O. Divya

Dr. K. Srinivasa Rao (Professor & Head)

Dr. V.S.S. Murthy
(Principal)

Dr. Kandula Chandra Obul Reddy (MD, KGI)

Smt. K.Rajeswari
(Correspondent,Secretary,Treasurer)

Sri K. Madan Mohan Reddy (Vice - Chairman)

Sri K. Raja Mohan Reddy
(Chairman)





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(AUTONOMOUS)

Pulivendala Road, Kadapa-516 005 Andhra Pradesh, India



Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.

An ISO 14001:2004 & 9001: 2015 Certified Institution

ACTIVITY REPORT

Value Added Course

On

IOT with Python Programming 19/01/2023 to 04/02/2023

Target Group

Students

Details of Participants

52 Students

Coordinator

Smt. O. Divya

Asst. Prof, Dept. of AI&ML

Organizing Department

Artificial Intelligence & Machine Learning

Venue

Python Programming Lab (AI-207)

Description:

Value Added course on "IOT with Python Programming" was organized by Dept. of AI&ML from 19/01/2023 to 04/02/2023. Smt. O.Divya acted as Course Coordinator and Resource person. The course is designed to provide complete knowledge of IOT with Python Programming and to enhance the programming skills of the students by giving practical assignments to be done in labs. The Python Programming certification course provides an indepth knowledge about Python.

Python is a programming language with a special focus on the concepts of OOPs and their implementation. It has object-oriented features, which allow the programmer to create objects within the code. This makes programming easier, more efficient, and some would even say, more fun.

The course helps acquire a fundamental understanding of the OOPs concepts, input/output data management, functions, classes, objects and much more. The course has been designed with a uniform structured series of modules enumerating various pertinent concepts.

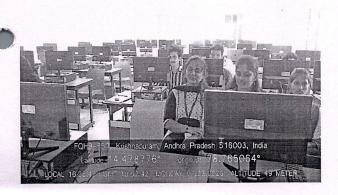
Photos:



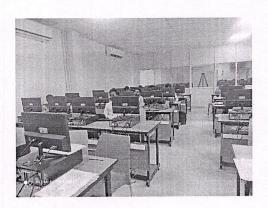
Lecture by Resource Person



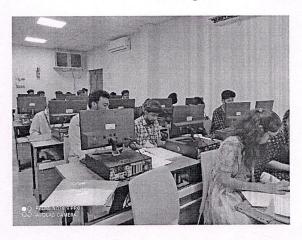
Students attended for the course



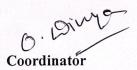
Students while Practicing



Students while Practicing



Students while Practicing



L5R00

HoD

Dr. K. SRINIVASA RAO, M.Tech., Ph.D. Professor & HOD AIML K.S.R.M. College of Engineering (Autonomous)
KADAPA- 516 005. (A.P.)



(UGC - Autonomous)

Kadapa, Andhra Pradesh, India-516 003 Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.



Certificate of Completion

This to certify that Mr/Mrs	S. Saad	Bearing	
the Roll Number 27941A3952	has Siccessfu	lly Completed v	alue Added
The Roll Number	in the second	19th January 2	2023 to
Course on "IOT with Python Prog	gramming irom		par II and a sa a
04 February 2023 Organized by	Department of	AI&ML,KSRMC	E, Kaaapa.

Coordinator

HOD AI&ML

Principal





(UGC - Autonomous)

Kadapa, Andhra Pradesh, India-516 003 Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.



lives on

Certificate of Completion

Bearing This to certify that Mr/Mrs. E. Sunya prakoush the Roll Number 2194140545 has Siccessfully Completed value Added Course on "IOT with Python Programming" from 19th January 2023 to 04 February 2023 Organized by Department of AI&ML, KSRMCE, Kadapa.

Coordinator

HOD AI&ML

Principal





(UGC - Autonomous)

Kadapa, Andhra Pradesh, India- 516 003 Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.



Certificate of Completion

This to certify that Mr/Mrs. polisetty Kalyani the Roll Number 2294140513 has Successfully Completed value Added Course on "IOT with Python Programming" from 19th January 2023 to 04 February 2023 Organized by Department of AI&ML, KSRMCE, Kadapa.

Coordinator

HOD AI&ML

V. S. S. Mulis Principal



	The objectives of the Value Added Course were met (Objective) *
	C Excellent
	Good
	Satisfactory
	Poor
	The content of the course was organized and easy to follow (Delivery) * *
	O Excellent
	Good
	Satisfactory
	Poor
	The Resource Persons were well prepared and able to answer any question * (Interaction)
)	O Excellent
	Good
	Satisfactory
	O Poor

	The exercises/role play were helpful and relevant (Syllabus Coverage) * *
	C Excellent
	Good
	Satisfactory
	Poor
)	The Value Added Course satisfy my expectation as a value added Programme * (Course Satisfaction)
	O Excellent
	Good
	O Satisfactory
	Poor
	Any Issues *
	Your answer
	Submit . Clear form

Never submit passwords through Google Forms.

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Гimestamp		ROLL NO	DEPARTM	College Email	The content of the course was organized and easy to follow (Delivery) *	The Resource Persons were well prepared and able to answer any question (Interaction)	The exercises/r ole play were helpful and relevant (Syllabus Coverage) *	Added Course satisfy my expectation as a value added Programme (Course Satisfaction)	A n y Is s u es
	CHEKKA VENKATA			229y5a3901@ksrmce.	NEW CONTRACTOR OF THE PARTY OF	Satisfactory	Good	Good	No
1-10-2023 17:10:39	BOJANAPALLI SAI F	229y5a0503	NUMBER OF STREET	229y5a0503@ksrmce.		Good	Excellent	Excellent	
1-10-2023 17:39:44		219y1a3952	Zalich (meditys) and a late of the	219y1a3952@ksrmce		Excellent	Good	Good	
1-10-2023 18:44:25	A.Rushi kesava Redo	219y1a0507	Cse	219y1a0507@ksrmce	OCCUPATION OF THE PROPERTY OF THE PARTY.	Excellent	Excellent	Good	
1-10-2023 19:13:13	Santhosh Reddy	219y1a3912	AI ML	219y1a3912@ksrmce	CHARLES THE CONTRACT OF THE CO	Excellent	Good	Good	
1-10-2023 19:26:38	KOTLO DHANUSH	229y5a3903	AI&ML	229y5a3903ksrmce.ad	V SVINISTE TOURS OF STREET	Good	Satisfactory	Good	-
1-11-2023 10:16:32	Y.DILEEP KASI	229y5a3907	AI&ML	229y5a3907@ksrmce		Good	Excellent	Satisfactory	_
1-11-2023 12:23:18	Tamatam Janardhan	219y1a05h3	Cse	219y1a05h3@ksrmce	Satisfactory	Excellent	Excellent	Satisfactory	
1-11-2023 13:29:52	Polisetty kalyani	229y5a0513	Cse c	229y5a0513	Good	Satisfactory	Good	Satisfactory	
1-11-2023 13:40:04	D.Mahindra	219y1a0536	Cse	219y1a0536@ksrmce	Good	Satisfactory	Good	Good	
1-11-2023 13:43:35	H.V.SIVA KUMAR	219y1a0564	CSE	219y1a0564@ksrmce	Good	Good	Excellent	Good	
1-11-2023 13:45:00	G.shanmukha datta	219y1a0559	Cse	219y1a0559@ksrmce	Good	Satisfactory	Excellent	Excellent	
1-11-2023 13:48:34	P. Rasoolbee	219y1a05c7	Cse	219y1a05c7@ksrmce	Good	Satisfactory	Good	Good	
1-11-2023 13:51:07	P.babjan	219y1a05c8	CSE	219y1a05c8@ksrmce	. Satisfactory	Good	Good	Good	
1-11-2023 13:51:14	N.Reddamma	219y1a05c4	Cse	219y1a05c4@ksrmce	Excellent	Good	Excellent	Good	
1-11-2023 13:52:34	K.KARTHIKEYAN	219y1a0583	CSE	219y1a0583@ksrmce	Good	Satisfactory	Satisfactory	Good	
1-11-2023 14:07:43	M.Bindhulatha	219y1a05b2	Cse	219y1a05b2@ksrmce	Good	Excellent	Excellent	Excellent	
1-11-2023 16:19:00	V.Drakshayini	219y1a05h9	CSE	219y1a05h9@ksrmce	Good	Satisfactory	Excellent	Excellent	
1-11-2023 16:32:49	THE PROPERTY OF THE PROPERTY O	229y5a0517	CSE	2295a0517@ksrmce.a	Good	Good	Good	Satisfactory	
1-11-2023 18:52:44	I WALL COMMISSION OF STREET WAS A STREET OF STREET	219y1a05d1	Cse	219y1a05d1@ksrmce	Good	Good	Excellent	Satisfactory	
1-11-2023 19:13:47	M.Venkata Sai Nikhi	219Y1A05A	CSE	219y1a05a2@ksrmce	Good	Satisfactory	Excellent	Good	
1-11-2023 20:30:09	Mannaii asif	219Y1A05A	Cse	219y1a05a8@ksrmce	Satisfactory	Good		Good	

1-11-2023 20:49:59	B Gowthami	219y1a0517	CSE	219y1a0517@ksrmce	Good	Good	Good	Good
	Nalipi Sridhar Reddy		-megapharatastastastastastasta	219y1a3933@ksrmce.	Excellent	Good	Good	Good
1 12 2023 21:46:32	B.jagadeeswarreddy	219v1a0513	ALL DESCRIPTIONS OF THE PROPERTY OF	219y1a0513@ksrmce.		Good	Satisfactory	Good
1-12-2023 9:19:00		219Y1A053	and the second second second second	219y1a0533@ksrmce.	the state of the s	Satisfactory	Good	Satisfactory
1-12-2023 9:19:00		219y1a0516	A CONTRACTOR OF THE PARTY OF TH	219y1a0516@ksrmce.	Excellent	Excellent	Satisfactory	Excellent
1-13-2023 10:29:30	B. C.C.	229y5a3907	KARMANA MANAGAMANA	229y5a3907@ksrmce.		Excellent	Good	Good
	BOJANAPALLI SAI F		No. of the second second second	229y5a0503@ksrmce.	Charles of the state of the sta	Good	Satisfactory	Good
1-13-2023 19:17:59	PERSONAL PROPERTY AND PROPERTY OF THE PROPERTY	219y1a0504		219y1a0504@ksrmce.		Good	Good	Excellent
1-14-2023 12:20:49		219y1a3909	HILL PROBLEM AND AND ADDRESS OF THE PARTY OF	219y1a3909@ksrmce.	HAVE BEEN BOOK OF THE PARTY OF	Good	Satisfactory	Excellent
	C Sathya Chakradha		and the second s	219y1a0520@ksrmce	THE PROPERTY OF STREET, SHE WAS A STREET, SHE WA	Excellent	Good	Good
1-18-2023 13:54:01		219y1a0551	Cse	219y1a0551@ksrmce	Control of the Property of the Control of the Contr	Excellent	Satisfactory	Excellent
	Bonala Venkateswar		PROPERTY OF THE PROPERTY OF TH	219y1a0514@ksrmce	Contraction of the Contract of	Excellent	Satisfactory	Excellent
1-18-2023 15:13:05		229Y5A390		229y5a3904@ksrmce		Excellent	Satisfactory	Good
	V C IVII II IC C I II I I	229y5a390	Professional Contraction	229y5a3907@ksrmce		Good	Good	Excellent
1-18-2023 15:13:47	Y.HEMANTH KUMAI			229y5a3906@ksrmce	The state of the s	Good	Excellent	Good
	The state of the second of the	219y1a3935		219y1a3935@ksrmce	NO CONTROL OF THE PARTY OF THE	Good	Good	Good
1-18-2023 18:00:13		219y1a0545	CONTRACTOR OF THE STATE OF	29y1a0545@ksrmce.a	With the state of the second o	Excellent	Excellent	Good
1-18-2023 18:59:18	Sharath Kumar Redo	-	C12 12 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	219y1a3902@ksrmce	the least of the latter and the latt	Excellent	Satisfactory	Good
		219Y1A050		219Y1A0501@ksrmce		Excellent	Excellent	Excellent
1-19-2023 12:54:44	State of the state	21911A030	the second of th	219y1a3955@ksrmce	PARTY TO SERVICE THE PARTY THE PARTY TO SERVICE THE PARTY TO SERVICE THE PARTY TO SERVICE THE	Good	Good	Good
	S. Hemanth kumar			219y1a0523@ksrmce		Excellent	Good	Excellent
	C.Devendra prasad	219y1a052	Cse	219y1a05b0@ksrmce	STATE OF THE PROPERTY OF THE PARTY OF THE PA	Satisfactory	Good	Good
1-20-2023 13:31:38				229y5a3906@ksrmce		Good	Good	Good
	YERRA HEMANTH	229y5a390		229y5a3907ksrmce	THE RESERVOIR AND COMPANY OF THE PROPERTY OF T	Excellent	Good	Good
1-21-2023 16:06:31		The state of the s	the property of the collection	229y5a3901@ksrmce		Good	Good	Good
	CHEKKA VENKATA	219Y1A053		219Y1A0534@ksrmc		Good	Satisfactory	Good
1-23-2023 16:07:24		and the second of the second o		219y1a0525@ksrmce		Good	Good	Excellent
	1 Chinthaginjala Induv			219y1a0526@ksrmce		Good	Good	Excellent
	8 Chinthaginjala poojit			219y1a3914@ksrmce		Excellent	Satisfactory	
1-24-2023 15:48:5	THE BUT SERVICE WORLD CONTROL OF THE SERVICE OF THE	219y1a391	The state of the s	219y1a3914@ksrmce		Satisfactory	Good	Satisfactory
1-24-2023 15:52:0	6 P.pochamma	219y1a391	4AIMI	12 199 183943@KSITICE	FILYCEHELIK	Jaciolaciony	15000	

o. Divyc co ordinator Dr. K. SRINIVAS PAO, M. Tech., Ph.D. Professer & MOD AIML K.S.R.M. College of Engineering (Autonomous)
KADAPA- 516 005. (A.P.)

K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA-516003 DEPARTMENT OF ARTIFICIAL INTELIGENCE & MACHINE LEARNING VALUE ADDED COURSE ON IoT USING PYTHON PROGRAMMING FROM 19/01/2023 TO 04/02/2023 AWARD LIST

S.No	Name	ROLL NO	Marks Obtained
1	CHEKKA VENKATA JEEVAN KUMAR	229y5a3901	15
2	BOJANAPALLI SAI PAVAN	229y5a0503	19
3	Saad	219y1a3952	20
4	A.Rushi kesava Reddy	219y1a0507	20
5	Santhosh Reddy	219y1a3912	19
6	KOTLO DHANUSH	229y5a3903	15
7	Y.DILEEP KASI	229y5a3907	14
8	Tamatam Janardhan Reddy	219y1a05h3	20
9	Polisetty kalyani	229y5a0513	19
10	D.Mahindra	219y1a0536	18
11	H.V.SIVA KUMAR	219y1a0564	90
12	G.shanmukha datta reddy	219y1a0559	20
13	P. Rasoolbee	219y1a05c7	17
14	P.babjan	219y1a05c8	
15	N.Reddamma	219y1a05c4	10
16	K.KARTHIKEYAN	219y1a0583	07
17	M.Bindhulatha	219y1a05b2	19
18	V.Drakshayini	219y1a05b2	1-1
19	T.shanmukha sai	229y5a0517	17
20	P. Somalatha	219y1a05d1	17
21	M.Venkata Sai Nikhil	219Y1A05A2	7.0
		219Y1A05A8	
22	Mannaji asif		20
23	B.Gowthami	219y1a0517 219Y1A3933	20
24	Nalipi Sridhar Reddy		
25	B.jagadeeswarreddy	219y1a0513 219Y1A0533	9.6
26	D.Balaji		
27	B. Sree Harshitha	219y1a0516	16
28	Dileep kasi	229y5a3907	02
29	BOJANAPALLI SAI PAVAN	229y5a0503	10
30	A.Bindu sree	219y1a0504	13
31	Chennavenkatesh	219y1a3909	14
32	C Sathya Chakradhar	219y1a0520	10
33	G. Sivashailaja	219y1a0551	19
34	Bonala Venkateswarlu	219y1a0514	20
35	V S MANJUNATH	229Y5A3904	20
36	Y DILEEP	229y5a3907	14
37	Y.HEMANTH KUMAR	229y5a3906	17
38	N. Vasavi	219y1a3935	20
39	E.Suryaprakash	219y1a0545	20
40	Sharath Kumar Reddy Annem	219y1a3902	20 20 19
41	A suneetha	219Y1A0501	20
42	S. Hemanth kumar	219y1a3955	19
43	C.Devendra prasad	219y1a0523	18
44	M.hemalathq	219y1a05b0	17
45	YERRA HEMANTH KUMAR	229y5a3906	20
46	Y.DILEEP KASI	229y5a3907	14

47	CHEKKA VENKATA JEEVAN KUMAR	229y5a3901	15
48	D.pavithra	219Y1A0534	20
49	Chinthaginjala Induvadana	219y1a0525	19
50	Chinthaginjala poojitha	219y1a0526	19
51	G. Nikhitha	219y1a3914	20
52	P.pochamma	219y1a3914	20

Dr. K. SRINIVASA RAU, M. Tech., Ph.D.
Professor & HOD AIML
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K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA-516003 DEPARTMENT OF ARTIFICIAL INTELLIGENCE & MACHINE LEARNING VALUE ADDED COURSE ON

IoT using Python Programming FROM 19/01/2023 TO 04/02/2023 ASSESSMENT TEST

Roll N	umber	: Name of the Student:		
Time:	20 Mii	n (Objective Questions)	Max	.Marks: 20
		the following Questions and each question carries one mark.		
1.	IoT st	ands for:	[]
a)	Interne	et of Tech		
b)	Incorp	oration of Things		
c)	Interne	et of Things		
d)	Incorp	oration of Technology		
2.	Which	of the following cannot be considered an IoT device?	[]
	a.	Smartwatch		
	b.	Andriod Phone		
	c.	Laptop		
	d.	Tubelight		
3.	Which	is not an IoT platform?	[
	a.	Xiaomi Cloud		
	b.	GoogleCloud		
	c.	Myntra		
	d.	AWS(Amazon Web Services)		
4.	Whiel	h of the following can not be considered an IoT device?	[]
	a.	Smartwatch		
	b.	Andriod Phone		
	c.	Laptop		
	d.	Tubelight		
5.	IoT is	based on technology.	[]
	a.	Hardware		
	b.	Software		
	c.	None		
	d.			
6.	What	is considered the standard length for a MAC Address?	[]
	a.			
	b. c.	32 bits 48 bits		
		None of these		

7.	What	is an IoT network?	[]
	a.	a collection of networked devices		
	b.	a collection of Interconnected devices		
	c.	a collection of signalled devices		
	d.	None of the above		
8.	What	is the java extension file used in IoT?	[]
	a.	.jar		
	b.	.obj		
	c.	.срр		
	d.	.exe		
9.	Whiel	one out of these is not a Data Link Layer Technology?	[] .
	a.	Bluetooth		
	b.	Wifi		
	c.	HTTP		
	d.	Mobile Hotspot		
10.	What	is the standard form of LLN?	[]
	a.	Lower Lossy Network		
	b.	Low Power Lossy Network		
	c.	Lossy Low Power Network		
	d.	Low Lossy Powered Network		
11.	What	type of interface is used by fingerprint sensors to collect data?	[]
	a.	IPI interface		
	b.	UART interface		
	c.	I2P interface		
	d.	None		
12.	How r	nany wires does the SPI protocol use?	[]
	a.	3		
	b.	4		
	c.	2		
	d.	More than 4		
13.		gst which of the following is / are the Numeric Types of Data Ty	pes	?[]
	a. b.	int float		
		complex		
		All of the mentioned above		

14. list, tu	ple, and range are the of Data Types.	[]
a.	Sequence Types		
b.	Binary Types		
c.	Boolean Types		
d.	None of the mentioned above		
15. Float	type of data type is represented by the float class.	[]
a.	True		
b.	False		
•	bytearray, memoryview are type of the data type.	[]
	Mapping Type		
	Boolean Type		
	Binary Types		
	None of the mentioned above		
17. The ty	pe() function can be used to get the data type of any object.	[1
	True		
	False		
	nongst which of the following is / are the logical operators in Py	thoi	1?[
	and		
b.	or		
	not		
	All of the mentioned above		
	thon supports exception handling?	l]
	Yes		
	No		
	is the name of the operator ** in Python?	[1
	Exponentiation		
	Modulus		
	Floor division		
d.	None of the mentioned above		

19

K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA-516003 DEPARTMENT OF ARTIFICIAL INTELLIGENCE & MACHINE LEARNING VALUE ADDED COURSE ON

<u>IoT using Python Programming FROM 19/01/2023 TO 04/02/2023</u>

ASSESSMENT TEST

Roll N	umber: 2191143955 Name of the		th Kumar
Time:	20 Min (Objective Qu	iestions)	Max.Marks: 20
	Answer the following Questions and each que		
1.	IoT stands for:		[C]
a)	Internet of Tech		
b)	Incorporation of Things		
c)	Internet of Things		
d)	Incorporation of Technology		
2.	Which of the following cannot be consider	ed an IoT device?	[a]
	a. Smartwatch		
	b. Andriod Phone		
	c. Laptop		
	d. Tubelight		
3.	Which is not an IoT platform?		[9]
	a. Xiaomi Cloud		
	b. GoogleCloud		
	c. Myntra		
	d. AWS(Amazon Web Services)		
4.	Which of the following can not be consider	ered an IoT device?	[d]
	a. Smartwatch		
	b. Andriod Phone		
	c. Laptop		
	d. Tubelight		
5.	IoT is based on technology.		[8]
	a. Hardware		
	b. Software		
	c. None		
	d. Both of these		
6.	What is considered the standard length fo	r a MAC Address?	[6]
	a. 8 bits		
	b. 32 bits		
	c. 48 bits		

d. None of these

a. a collection of networked devices b. a collection of Interconnected devices c. a collection of signalled devices d. None of the above 8. What is the java extension file used in IoT? a. jar b. obj c. cpp d. exe 9. Which one out of these is not a Data Link Layer Technology? [C] a. Bluetooth b. Wiff c. HTTP d. Mobile Hotspot 10. What is the standard form of LLN? a. Lower Lossy Network b. Low Power Lossy Network c. Lossy Low Power Network d. Low Lossy Powered Network 11. What type of interface is used by fingerprint sensors to collect data? [b] a. IPI interface b. UART interface c. I2P interface d. None 12. How many wires does the SPI protocol use? a. 3 b. 4 c. 2 d. More than 4 13. Amongst which of the following is / are the Numeric Types of Data Types? [d] a. int b. float c. complex d. All of the mentioned above	7.	What is an IoT network?	[0]
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9. Which one out of these is not a Data Link Layer Technology? a. Bluetooth b. Wifi c. HTTP d. Mobile Hotspot 10. What is the standard form of LLN? a. Lower Lossy Network b. Low Power Lossy Network c. Lossy Low Power Network d. Low Lossy Powered Network 11. What type of interface is used by fingerprint sensors to collect data? a. IPI interface b. UART interface c. 12P interface d. None 12. How many wires does the SPI protocol use? a. 3 b. 4 c. 2 d. More than 4 13. Amongst which of the following is / are the Numeric Types of Data Types? [A] a. int b. float c. complex		ccpp	
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c. HTTP d. Mobile Hotspot 10. What is the standard form of LLN? a. Lower Lossy Network b. Low Power Lossy Network c. Lossy Low Power Network d. Low Lossy Powered Network 11. What type of interface is used by fingerprint sensors to collect data? [b] a. IPI interface b. UART interface c. I2P interface d. None 12. How many wires does the SPI protocol use? a. 3 b. 4 c. 2 d. More than 4 13. Amongst which of the following is / are the Numeric Types of Data Types? [d] a. int b. float c. complex		a. Bluetooth	
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c. 2 d. More than 4 13. Amongst which of the following is / are the Numeric Types of Data Types? [d] a. int b. float c. complex		a. 3	
d. More than 4 13. Amongst which of the following is / are the Numeric Types of Data Types? [4] a. int b. float c. complex		b, 4	
13. Amongst which of the following is / are the Numeric Types of Data Types? [4] a. int b. float c. complex		c. 2	
a. intb. floatc. complex		d. More than 4	
b. float c. complex	13.		ypes?[d]
c. complex			
: 트레트 (CONTROL OF CONTROL OF CON			

14. list, tu	ple, and range are the of Data Types.	[C]
a.	Sequence Types	
b.	Binary Types	
c.	Boolean Types	
d.	None of the mentioned above	
15. Float	type of data type is represented by the float class.	[C]
a.	True	
b.	False	
16. bytes,	bytearray, memoryview are type of the data type.	[C]
a.	Mapping Type	
b.	Boolean Type	
c.	Binary Types	
d.	None of the mentioned above	
17. The t	pe() function can be used to get the data type of any object.	[a]
a.	True	
	False	
18. 11. A	nongst which of the following is / are the logical operators in Py	thon? [d]
a.	and	
h		
0.	or	
c.	not	
c. d.	not All of the mentioned above	
c. d.	not	
c. d. 19. Is Py	not All of the mentioned above	[a]
c. d. 19. Is Py a. b.	not All of the mentioned above thon supports exception handling? Yes No	
c. d. 19. Is Py a. b.	not All of the mentioned above thon supports exception handling? Yes	[a] [c]
c. d. 19. Is Py a. b. 20. What a.	not All of the mentioned above thon supports exception handling? Yes No is the name of the operator ** in Python? Exponentiation	
c. d. 19. Is Py a. b. 20. What a. b.	All of the mentioned above thon supports exception handling? Yes No is the name of the operator ** in Python? Exponentiation Modulus	
c. d. 19. Is Py a. b. 20. What a. b. c.	not All of the mentioned above thon supports exception handling? Yes No is the name of the operator ** in Python? Exponentiation	

K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA-516003 DEPARTMENT OF ARTIFICIAL INTELLIGENCE & MACHINE LEARNING VALUE ADDED COURSE ON

<u>IoT using Python Programming FROM 19/01/2023 TO 04/02/2023</u>

ASSESSMENT TEST

Roll Number: 22945 A3904 Name of the Student: VS manjunath

	20 Min (Objective Questions)	Max.Marks: 20
Note:	Answer the following Questions and each question carries one mark	.
1.	IoT stands for:	[C]
a)	Internet of Tech	
b)	Incorporation of Things	
c)	Internet of Things	
d)	Incorporation of Technology	
2.	Which of the following cannot be considered an IoT device?	[a]
	a. Smartwatch	
	b. Andriod Phone	
	c. Laptop	
	d. Tubelight	
3.	Which is not an IoT platform?	[d]
	a. Xiaomi Cloud	
	b. GoogleCloud	
	c. Myntra	
	d. AWS(Amazon Web Services)	
4.	Which of the following can not be considered an IoT device?	ld I
	a. Smartwatch	
	b. Andriod Phone	
	c. Laptop	
	d. Tubelight	
5.	IoT is based on technology.	[d]
	a. Hardware	
	b. Software	
	c. None	
	d. Both of these	
6.	What is considered the standard length for a MAC Address?	191
	a. 8 bits	
	b. 32 bits	
	c 48 hits	

d. None of these

7. What is an IoT network?	[a]	
a. a collection of networked devices		
b. a collection of Interconnected devices		
c. a collection of signalled devices		
d. None of the above	40 12	
8. What is the java extension file used in IoT?	[a]	
ajar		
bobj		
ccpp		
dexe		
9. Which one out of these is not a Data Link Layer Technology?	[0]	
a. Bluetooth		(
b. Wifi		
c. HTTP		
d. Mobile Hotspot		
10. What is the standard form of LLN?	[6]	
a. Lower Lossy Network		
b. Low Power Lossy Network		
c. Lossy Low Power Network		
d. Low Lossy Powered Network	. /	
11. What type of interface is used by fingerprint sensors to collect da	ta? [b]	
a. IPI interface		
b. UART interface		
c. I2P interface		
d. None		
12. How many wires does the SPI protocol use?	[b]/	
a. 3		
b. 4		
c. 2		
d. More than 4	/	
13. Amongst which of the following is / are the Numeric Types of Dat	a Types? [d]	
a. int b. float		
c. complex		
d. All of the mentioned above		

14. list, tuple, and range are the of Data Types.	[a]
a. Sequence Types	
b. Binary Types	
c. Boolean Types	
d. None of the mentioned above	
15. Float type of data type is represented by the float class.	[0]
a. True	
b. False	
16. bytes, bytearray, memoryview are type of the data type.	[C]
a. Mapping Type	
b. Boolean Type	
c. Binary Types	
d. None of the mentioned above	
17. The type() function can be used to get the data type of any object.	[a]
a. True	
b. False	1.
18. 11. Amongst which of the following is / are the logical operators in F	ython? [d]
a. and	
b. or	
c. not	
d. All of the mentioned above	
19. Is Python supports exception handling?	[a]
a. Yes	
b. No	
20. What is the name of the operator ** in Python?	[4]
a. Exponentiation	
b. Modulus	
c. Floor division	
d. None of the mentioned above	

K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA-516003 DEPARTMENT OF ARTIFICIAL INTELLIGENCE & MACHINE LEARNING VALUE ADDED COURSE ON

IoT using Python Programming FROM 19/01/2023 TO 04/02/2023

Roll Number: 2/97 100564	ASSESSMENT TEST Name of the Student: H V Sov	Kumar
Time: 20 Min	(Objective Questions)	Max.Marks: 20
	ons and each question carries one mark.	
1. IoT stands for:		14
a) Internet of Tech		
b) Incorporation of Things		
(Internet of Things		
d) Incorporation of Technolog	У	
2. Which of the following car	nnot be considered an IoT device?	101
a. Smartwatch		
b. Andriod Phone		
c. Laptop		
d. Tubelight		
3. Which is not an IoT platfe	orm?	191
a. Xiaomi Cloud		
b. GoogleCloud		
c. Myntra		
d. AWS(Amazon Web	Services)	
4. Which of the following ca	n not be considered an IoT device?	[6]
a. Smartwatch		
b. Andriod Phone		
c. Laptop		
d. Tubelight		
5. IoT is based on te	chnology.	6
a. Hardware		
b. Software		
c. None		
d. Both of these		
6. What is considered the st	andard length for a MAC Address?	14
a. 8 bits		
b. 32 bits		
c. 48 bitsd. None of these		
u. None of these		

7. What is an IoT network?	[0]
a. a collection of networked devices	
b. a collection of Interconnected devices	
c. a collection of signalled devices	
d. None of the above	
8. What is the java extension file used in IoT?	[6]
ajar	
bobj	
ccpp	
dexe	
9. Which one out of these is not a Data Link Layer Technology	ology?
a. Bluetooth	
b. Wifi	
c. HTTP	
d. Mobile Hotspot	
10. What is the standard form of LLN?	[6]
a. Lower Lossy Network	
b. Low Power Lossy Network	
c. Lossy Low Power Network	
d. Low Lossy Powered Network	
11. What type of interface is used by fingerprint sensors to	collect data? [D]
a. IPI interface	
b. UART interface	
c. I2P interface	
d. None	
12. How many wires does the SPI protocol use?	[4]
a. 3	
b. 4	
c. 2	
d. More than 4	
13. Amongst which of the following is / are the Numeric Ty	pes of Data Types? []
a. int	
b. float c. complex	
d. All of the mentioned above	

14	4. list, tu	ple, and range are the of Data Types.	[0]
	a.	Sequence Types	
		Binary Types	
	c.	Boolean Types	
	d.	None of the mentioned above	
1:	5. Float	type of data type is represented by the float class.	104
	a.	True	
		False	
10		bytearray, memoryview are type of the data type.	[C]
		Mapping Type	
	b.	Boolean Type	
		Binary Types	
	d.	None of the mentioned above	/
1'	7. The ty	ype() function can be used to get the data type of any object.	[6]
	a.	True	
		False	4
1	8. 11. Aı	nongst which of the following is / are the logical operators in Py	thon? [d]
	a.	and	
	b.	or	
		not	
		All of the mentioned above	,
1	9. Is Py	thon supports exception handling?	[0]
		Yes	
		No	/
2		is the name of the operator ** in Python?	[C)
		Exponentiation	
		Modulus	
		Floor division	
	d	None of the mentioned above	

K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA-516003 DEPARTMENT OF ARTIFICIAL INTELLIGENCE & MACHINE LEARNING VALUE ADDED COURSE ON

<u>IoT using Python Programming FROM 19/01/2023 TO 04/02/2023</u>

ASSESSMENT TEST

Roll Number: 22945A3906 Name of the Student: 2. He mouth Kumay

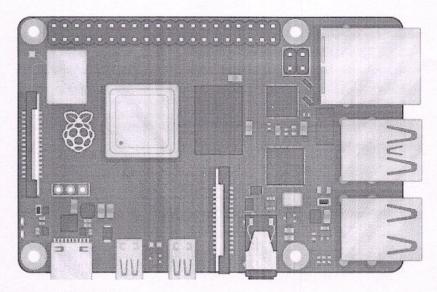
	20 Min (Objective Questions)	Max.Marks: 20
Note:	Answer the following Questions and each question carries one mark.	
1.	IoT stands for:	[C]
a)	Internet of Tech	
b)	Incorporation of Things	
c)	Internet of Things	
d)	Incorporation of Technology	
2.	Which of the following cannot be considered an IoT device?	[0]
	a. Smartwatch	
	b. Andriod Phone	
	c. Laptop	
	d. Tubelight	
3.	Which is not an IoT platform?	[d]
	a. Xiaomi Cloud	
	b. GoogleCloud	
	c. Myntra	
	d. AWS(Amazon Web Services)	
4.	Which of the following can not be considered an IoT device?	[d]
	a. Smartwatch	
	b. Andriod Phone	/
	c. Laptop	
	d. Tubelight	
5.	IoT is based on technology.	[4]
	a. Hardware	
	b. Software	
	c. None	
	d. Both of these	
6.	What is considered the standard length for a MAC Address?	[b]
	a. 8 bits	
	b. 32 bits	
	c. 48 bits	

d. None of these

7. Wh	at is an IoT network?	161
;	a. a collection of networked devices	
, 1	b. a collection of Interconnected devices	
	e. a collection of signalled devices	
RIVER	i. None of the above	7
8. Wh	at is the java extension file used in IoT?	[OL]
;	ıjar	
1	o. obj	
	ccpp	
(dexe	
9. Wh	ch one out of these is not a Data Link Layer Technology?	[0]
:	a. Bluetooth	
	o. Wifi	
	e. HTTP	
(d. Mobile Hotspot	
10. Wh	at is the standard form of LLN?	[6]
:	a. Lower Lossy Network	
	b. Low Power Lossy Network	
	c. Lossy Low Power Network	
	d. Low Lossy Powered Network	
11. Wh	at type of interface is used by fingerprint sensors to collect data?	1917
	a. IPI interface	/
	b. UART interface	
(e. I2P interface	
(I. None	
12. Hov	many wires does the SPI protocol use?	161
:	n. 3	
	o. 4	
	2. 2	
(d. More than 4	
	ongst which of the following is / are the Numeric Types of Data T	ypes? [d]
	a. int o. float	
	c. complex	
	l. All of the mentioned above	

14. list, tuple, and range are the of Data Types.	[OY X
a. Sequence Types	
b. Binary Types	
c. Boolean Types	
d. None of the mentioned above	
15. Float type of data type is represented by the float class.	[C]
a. True	
b. False	
16. bytes, bytearray, memoryview are type of the data type.	[C]
a. Mapping Type	
b. Boolean Type	
c. Binary Types	
d. None of the mentioned above	
17. The type() function can be used to get the data type of any object.	[a]
a. True	
b. False	
18. 11. Amongst which of the following is / are the logical operators in I	Python? [d]
a. and	
b. or	
c. not	
c. not d. All of the mentioned above 19. Is Python supports exception handling?	Ial
c. not d. All of the mentioned above 19. Is Python supports exception handling? a. Yes	[a]
c. not d. All of the mentioned above 19. Is Python supports exception handling?	[0]
c. not d. All of the mentioned above 19. Is Python supports exception handling? a. Yes	
c. not d. All of the mentioned above 19. Is Python supports exception handling? a. Yes b. No 20. What is the name of the operator ** in Python? a. Exponentiation	[a]
c. not d. All of the mentioned above 19. Is Python supports exception handling? a. Yes b. No 20. What is the name of the operator ** in Python?	
c. not d. All of the mentioned above 19. Is Python supports exception handling? a. Yes b. No 20. What is the name of the operator ** in Python? a. Exponentiation	

Raspberry Pi is a tiny (about 9x6cm), low-cost (\$35+), single-board computer that supports embedded Linux operating systems [2]. The recommended Operating System is called Raspberry Pi OS (Linux based). Figure 1.1 shows the Raspberry Pi.



The Raspberry Pi is a small computer that can do lots of things It has a small footprint (about 9x6cm) and it is cheap (\$35+) You plug it into a monitor and attach a keyboard and mouse It has so-called GPIO pins (General Purpose Input/Output) for connection sensors and other electronic components like LEDs, etc.

Raspberry Pi is as well suited for prototyping, datalogging and different electronics projects, a media center, etc. It can be used to learn programming, it and other technical skills, etc. RP has limited power (CPU, RAM, etc.) so it cannot normally replace a desktop computer or laptop for ordinary use for more information about the Raspberry Pi, see: https://www.raspberrypi.org

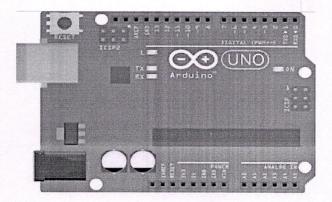
Raspberry Pi vs Arduino

You have probably already heard of Arduino? So whats the difference between Raspberry Pi and Arduino.

Figure 1.2 shows the Arduino Uno, which is the most popular Arduino device.

Here are the main differences: Rasberry Pi

- Raspberry PI is a Microcomputer
- It has an ordinary Operating System (OS)
- You can connect USB devices, Keyboard, Mouse, Monitors, etc.
- It has a "hard-drive"in form of a microSD card
- RP has Bluetooth, Wi-Fi, and Ethernet connection



RP has basically all the features an ordinary computer has but in a much smaller package

- Uptill 8 Gb RAM
- RP runs Linux applications Arduino:
- Arduino is a Microcontroller
- Arduino has a Bootloader and not an ordinary operating system
- Arduino is NOT a computer, only a small controller, whose purpose is to control things
- No Bluetooth, Wi-Fi (some models have), and Ethernet (but can be provided as so-called Shields)
- Very little RAM (a few Kb)
- Inexpensive

Getting Started with Raspberry Pi

What do you typically need to get started with Raspberry Pi?

- Raspberry Pi
- microSD Card (+ Adapter)
- Power Supply
- microHDMI to HDMI Cable
- Monitor
- Mouse
- Keyboard

Raspberry Pi OS

In order make your Raspberry Pi up and running you need to install an Operating System (OS). The OS for Raspberry Pi is called" Raspberry Pi OS" (previously known as Raspbian). Raspberry Pi runs a version of an operating system called Linux (Windows and macOS are other operating systems). To install the necessary OS, you need a microSD card. Then you use the" Raspberry Pi Imager" in order to download the OS to the microSD card.

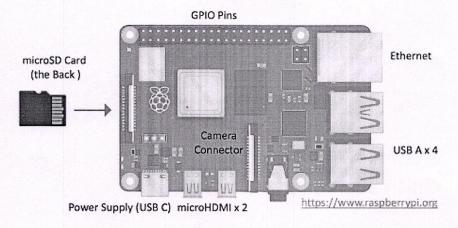


Figure 1.3: Raspberry Pi Connectors

1.5 Tools

1.6 Python Programming

Figure 1.6 shows Thonny.

Figure 1.6 shows Thonny Manage Packages.

1.7 GPIO Figure ?? shows the GPIO connector.

1.7.1 LED Figure 1.9 shows LED wiring.

Figure 1.10 shows LED wiring.

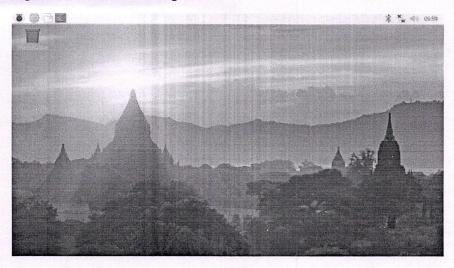


Figure 1.4: Raspberry Pi OS

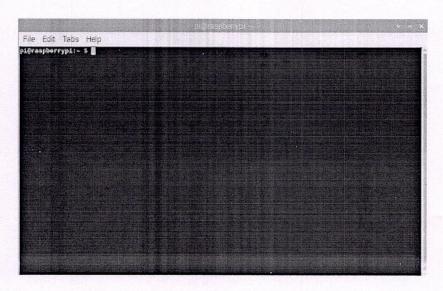


Figure 1.5: Tee Terminal

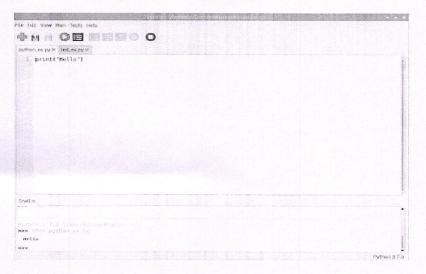


Figure 1.6: Thonny

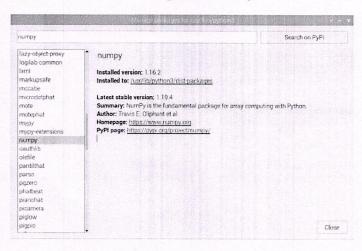
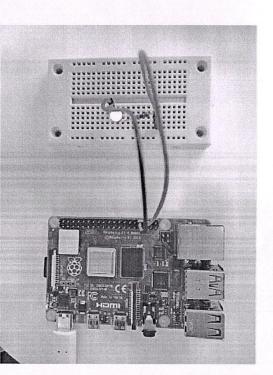
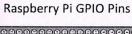


Figure 1.7: Thonny Manage Packages





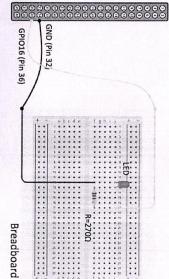


Figure 1.9: LED wiring

Figure 1.8: GPIO Connector

Figure 1.10: LED wiring

System Displa	y Interfaces	Performance	Localisation
Camera;	(•	Enable	Disable
SSH:		Enable	Disable
VNC:		Enable	Disable
SPI:	•	Enable	Disable
I2C:	•	Enable	Disable
Serial Port	•	Enable	Disable
Serial Console:		Enable	Disable
1-Wire:	•	Enable	Disable
Remote GPIO:		Enable	Disable
			Cancel OK

Figure 1.11: Enable/Disable Raspberry Pi Hardware Interfaces