

From

Dr.G.Mohanbabu,
Professor & Head,
Department of Electrical and Electronics Engineering,
SSM Institute of Engineering and Technology,
Dindigul-02

To

The Principal,
SSM Institute of Engineering and Technology,
Dindigul-02

Respected Sir,

Sub: Requesting Approval of conducting Technological Training for II Year EEE Students-Reg

The Department of EEE is planned to conduct Technological Training for Second year students on "Embedded System" which is scheduled on May 2022. In this regard, I request your permission to conduct this training on the scheduled month. Kindly do the needful.

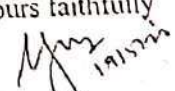
*The quotation details, syllabus and Training Schedule are attached with this letter.

Name of the Technological Training	Name of the Company	Total Number of Students	No of Hours	Date	Amount	Coordinator/Faculty in Charges
Training on Embedded System	PROLIFIC Systems and Technological Pvt. Ltd, Coimbatore	22 (Rs.1200 Per Student)	60	23.05.22 to 28.05.22	Rs 26,400	D.Manoj,A.P/EEE P.Siva Subramanian,A.P/EEE


Resource Person Details:

Mr. S. Raja, CRG Engineer

Thanking you.

Yours faithfully

(Dr.G.Mohanbabu)




Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (MUS)
Principal
SSM Institute of Engineering and Technology
Kuttathupattu Village, Sindalagundu (Po),
Palani Road, Dindigul - 624 002.



SSM Institute of Engineering and Technology

sindalagundu post, Dindigul -624-002, Tamilnadu pH: 0451-2448800
(Approved by AICTE, Affiliated to Anna University, Chennai Accredited by NAAC)

Department of Electrical and Electronics Engineering

Organizes

Six days Technology Training Program on

" Embedded System "

For II year students of EEE

from (23.05.2022 to 28.05.2022)

Trained by

Shree Technologies Private Limited, Coimbatore

Co-ordinators

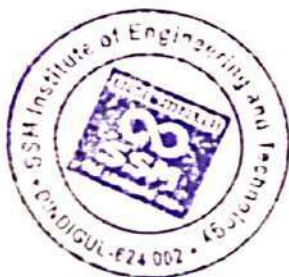
Mr.D.Manoj,AP/EEE
Mr.P.Siva Subramanian,AP/EEE

HoD

Dr.G.Mohanbabu

Principal

Dr.D.Senthil Kumaran



All are Invited

DR.D.SENTHIL KUMARAN, M.B., P.E.D., (NUS)
Principal

SSM Institute of Engineering and Technology
Sindalagundu Village, Sindalagundu (Tal.
Dindigul Road, Dindigul - 624 002.



SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi / Affiliated to Anna University, Chennai / Accredited by NAAC)

Dindigul-Palani Highway, Dindigul-624002

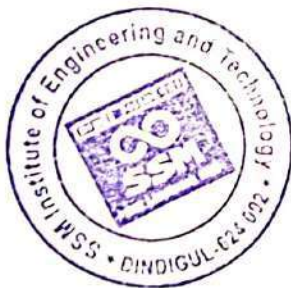
CIRCULAR

20/05/2022

This is to inform that six days training program on **EMBEDDED SYSTEMS** is going to conduct for II year EEE students from 23.05.2022 to 28.05.2022, by Shree Technologies private limited, Coimbatore. All the students are informed to attend and enrich your knowledge.

Faculty In-charge

HOD/EEE



Dr.D.SENTHIL KUMARAN, M.E., P.E.D., (NUS)
Principal
SSM Institute of Engineering and Technology
Kuttiathupatti Village, Sindalagundu (PO),
Palani Road, Dindigul - 624 002

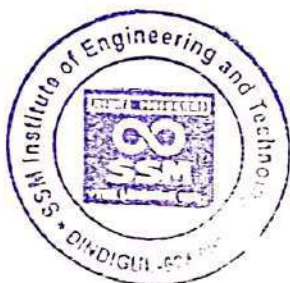


SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY
Department of Electrical and Electronics Engineering
II year B.E. Name List (2020-2024)

S. No.	Reg.no.	Student Name
1	922120105001	M.Akashkumar
2	922120105002	S.A.Amanulla
3	922120105003	P.M.Balaji
4	922120105004	R.Bharathi
5	922120105005	R.Dineshkumar
6	922120105006	T.Geethanjali
7	922120105007	P.Jothiselvam
8	922120105008	N.Karthikeyan
9	922120105009	M.Mariaraj
10	922120105010	S.Mohamedaburar
11	922120105011	S.Mohamedkasim
12	922120105012	M.Monesh
13	922120105013	S.Preethi
14	922120105014	M. Preethiviraj
15	922120105015	T.Rohith
16	922120105016	S.Sadhamhussain
17	922120105017	S.Sangarapandi
18	922120105018	R.Shanmugavel
19	922120105019	M.suriyaprakash
20	922120105020	V.Tamilselvan
21	922120105021	H. Thirsathdaniel
22	922120105301	M.Hariprasath
23	922120105302	R.Sharankailash

Faculty In-charge

HoD/EEE



Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (NUS)
Principal
SSM Institute of Engineering and Technology
Kuttathupatti Village, Sindalagundu (Po),
Palani Road, Dindigul - 624 002.

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
TECHNOLOGICAL TRAINING ON "EMBEDDED SYSTEM AND IOT"
ATTENDANCE SHEET



S.No.	Reg.No.	Student Name	24.05.22		25.05.22		26.05.22		27.05.22		28.05.22	
			FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
1	922120105001	M.Akashkumar	M.Akash	M.Akash	M.Akash	M.Akash	M.Akash	M.Akash	M.Akash	M.Akash	M.Akash	M.Akash
2	922120105002	S.A.Amanulla	S.A.A	S.A.A	S.A.A	S.A.A	S.A.A	S.A.A	S.A.A	S.A.A	S.A.A	S.A.A
3	922120105003	P.M.Balaji	P.M.Balaji	P.M.Balaji	P.M.Balaji	P.M.Balaji	P.M.Balaji	P.M.Balaji	P.M.Balaji	P.M.Balaji	P.M.Balaji	P.M.Balaji
4	922120105004	R.Bharathi	AB	AB	AB	AB	AB	AB	AB	AB	AB	AB
5	922120105005	U.Dineshkumar	U.Dinesh	U.Dinesh	U.Dinesh	U.Dinesh	U.Dinesh	U.Dinesh	U.Dinesh	U.Dinesh	U.Dinesh	U.Dinesh
6	922120105006	T.Geethanjali	T.Geetha	T.Geetha	T.Geetha	T.Geetha	T.Geetha	T.Geetha	T.Geetha	T.Geetha	T.Geetha	T.Geetha
7	922120105007	P.Jothiselvam	P.Jo	P.Jo	P.Jo	P.Jo	P.Jo	P.Jo	P.Jo	P.Jo	P.Jo	P.Jo
8	922120105008	N.Karthikeyan	N.Karthi	N.Karthi	N.Karthi	N.Karthi	N.Karthi	N.Karthi	N.Karthi	N.Karthi	N.Karthi	N.Karthi
9	922120105009	M.Mariaraj	M.Mariaraj	M.Mariaraj	M.Mariaraj	M.Mariaraj	M.Mariaraj	M.Mariaraj	M.Mariaraj	M.Mariaraj	M.Mariaraj	M.Mariaraj
10	922120105010	S.Mohamed aburar	S.Mohamed	S.Mohamed	S.Mohamed	S.Mohamed	S.Mohamed	S.Mohamed	S.Mohamed	S.Mohamed	S.Mohamed	S.Mohamed
11	922120105011	S.Mohamed kasim	S.Mohamed	S.Mohamed	S.Mohamed	S.Mohamed	S.Mohamed	S.Mohamed	S.Mohamed	S.Mohamed	S.Mohamed	S.Mohamed
12	922120105012	M.Monesh	M.Monesh	M.Monesh	M.Monesh	M.Monesh	M.Monesh	M.Monesh	M.Monesh	M.Monesh	M.Monesh	M.Monesh
13	922120105013	S.Preethi	S.Preethi	S.Preethi	S.Preethi	S.Preethi	S.Preethi	S.Preethi	S.Preethi	S.Preethi	S.Preethi	S.Preethi
14	922120105014	M. Preethiviraj	M.Preethi	M.Preethi	M.Preethi	M.Preethi	M.Preethi	M.Preethi	M.Preethi	M.Preethi	M.Preethi	M.Preethi
15	922120105015	T.Rohith	T.Rohith	T.Rohith	T.Rohith	T.Rohith	T.Rohith	T.Rohith	T.Rohith	T.Rohith	T.Rohith	T.Rohith
16	922120105016	S.Sadham hussain	S.Sadham	S.Sadham	S.Sadham	S.Sadham	S.Sadham	S.Sadham	S.Sadham	S.Sadham	S.Sadham	S.Sadham
17	922120105017	S.Sangarapandi	S.Sangar	S.Sangar	S.Sangar	S.Sangar	S.Sangar	S.Sangar	S.Sangar	S.Sangar	S.Sangar	S.Sangar
18	922120105018	R.Shanmugavel	R.Shanmug	R.Shanmug	R.Shanmug	R.Shanmug	R.Shanmug	R.Shanmug	R.Shanmug	R.Shanmug	R.Shanmug	R.Shanmug
19	922120105019	M.suriya prakash	M.Suriya	M.Suriya	M.Suriya	M.Suriya	M.Suriya	M.Suriya	M.Suriya	M.Suriya	M.Suriya	M.Suriya
20	922120105020	V.Tamilselvan	V.Tamil	V.Tamil	V.Tamil	V.Tamil	V.Tamil	V.Tamil	V.Tamil	V.Tamil	V.Tamil	V.Tamil
21	922120105021	H. Thirsath daniel	H.Thirsath	H.Thirsath	H.Thirsath	H.Thirsath	H.Thirsath	H.Thirsath	H.Thirsath	H.Thirsath	H.Thirsath	H.Thirsath
22	922120105301	M.Hariprasath	M.Haripr	M.Haripr	M.Haripr	M.Haripr	M.Haripr	M.Haripr	M.Haripr	M.Haripr	M.Haripr	M.Haripr

23 922120105302 R.Shivan Raitash

Faculty Incharge

HoD/EEE

Dr.B.SENTHIL KUMARAN, M.B., Ph.D., (MVS)

Principal

SSM Institute of Engineering and Technology

Kuttathupatti Village, Sindalagundu (Po),

Palani Road, Dindigul - 624002.

5 Days Training Program

Day 1:

- Introduction to Electrical, and Electronics Engineering
- Introduction to Power supply design
- Introduction to Microprocessor and Microcontroller
- Microcontroller and its GPIO pins
- GPIO pins of Microcontrollers (AT89C52, PIC16F877a, LPC82x)

Day 2:

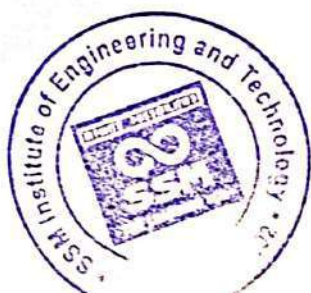
- Introduction to PIC Microcontroller
- Interfacing LED with PIC Microcontroller
- C Programming concept for using Microcontroller with Peripheral devices
- Interfacing seven segment display with Microcontroller
- Interfacing 16*2 LCD display with Microcontroller
- Interfacing switch and sensor with Microcontroller
- Interfacing Motor, Relay with Microcontroller

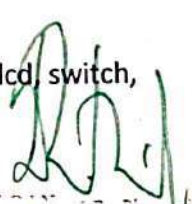
Day 3:

- Introduction to Proteus Design suite
- Generating a model circuit in Proteus Environment for Simulation
- Search, Select, Pick and Place the component in Proteus
- Run and Check the status of the designed circuit
- Introduction to Arduino IDE and Arduino Board
- GPIO pins of Arduino Board
- Interfacing led, seven segment display, LCD, switch, sensor, alarm, relay and motor with Arduino Board

Day 4:

- Creating circuit model using arduino board and peripherals (led,lcd,seven segment,sensor,alarm,motor and relay) in Proteus design suite and uploading the program in board and simulate.
- Creating Model Project using Arduino Uno board
- Introduction to NODEMCU(ESP8266)
- Using the digital and analog pins of ESP8266 for interfacing peripherals
- Practical using Microcontroller. Arduino Uno board, ESP8266 for led, seven segment, lcd, switch, sensor, relay and motor interfacing




Dr. SENTHIL KUMARAN, M.E., Ph.D., (NUS)
Principal
SSM Institute of Engineering and Technology
Kuttalampatti Village, Sindalagundu (P.O.)
Palani Road, Dindigul - 624 002

Day 5:

- Introduction to IOT
- Current Business Trends in IOT
- Benefits of IOT
- Barriers of IOT
- Case study
- IOT application architecture
- IOT using Blynk and ESP8266
- Modeling Automation using IOT

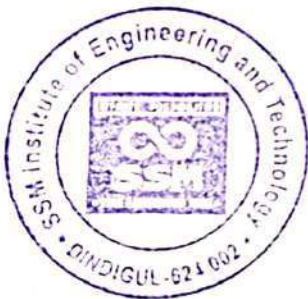
PROJECTS USING ABOVE CONCEPTS



Dr.D.SENTHIL KUMARAN M.E., Ph.D., (NUS)

Principal

**SSM Institute of Engineering and Technology
Kuttathupatti Village, Sindalagundu (Po),
Palani Road, Dindigul - 624 002.**





SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi / Affiliated to Anna University, Chennai / Accredited by NAAC)

Dindigul – Palani Highway, Dindigul 624 002

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Value added Course Summary (2021-2022)

Course Name : Embedded systems
Course Duration : 60 Hours
Year offered : II year students -2021-2022
Course Instructors : Mr. D. Manoj
Assistant professor /EEE

Course Outcome: The student would be able to apply the tools and techniques of Embedded and able to program and control the embedded systems platform.

Course Type : Self Framed / Collaboration with Industry

Assessment Mode

Attendance : 60 Hours
Number of participants : 22
Scheme of Exam : MCQ offline



Course Coordinator

Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (NUS)
Principal

SSM Institute of Engineering and Technology
Kottathupattu Village, Sindalagundi, Palani
Palani Road, Dindigul - 624 002

HoD

SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY

Sindalagundu post, Dindigul-624 002, Tamilnadu. Ph: 0451-2448800
(Approved by AICTE, Affiliated to Anna University, Chennai Accredited by NAAC)

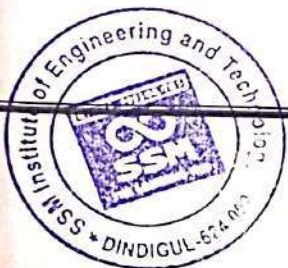
Summary Report

The department of Electrical and Electronics Engineering, SSM Institute of Engineering and Technology conducted **Technology training on Embedded System** from 23rd May 2022 to 28th May 2022. The course covered topics including Introduction to PIC microcontroller, LCD Interfacing, switch and sensor interfacing, motor and Relay Interfacing, Arduino IDE Node MCU, and ESP 8266. Students have attended assessment tests at the end of the course and certificates were issued. The students from third year EEE attended the course and got benefitted.



Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (NUS)
Principal

SSM Institute of Engineering and Technology
Kuthathupatti Village, Sindalagundu (Po),
Palani Road, Dindigul - 624 002.





SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY

Sindalagundu post, Dindigul-624002, Tamilnadu.Ph:0451-2448800

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

TECHNOLOGY TRAINING ON EMBEDDED SYSTEM

MARK SHEET

S. No.	Reg.no.	Student Name	MARK
1	922120105001	M.AKASHKUMAR	8
2	922120105002	S.A.AMANULLA	14
3	922120105003	P.M.BALAJI	12
4	922120105004	R.BHARATHI	AB
5	922120105005	U.DINESHKUMAR	12
6	922120105006	T.GEETHANJALI	10
7	922120105007	P.JOTHISELVAM	17
8	922120105008	N.KARTHIKEYAN	13
9	922120105009	M.MARIARAJ	9
10	922120105010	S.MOHAMED ABURAR	17
11	922120105011	S.MOHAMED KASIM	12
12	922120105012	M.MONESH	12
13	922120105013	S.PREETHI	9
14	922120105014	M. PREETHIVIRAJ	17
15	922120105015	T.ROHITH	14
16	922120105016	S.SADHAM HUSSAIN	13
17	922120105017	S.SANGARAPANDI	12
18	922120105018	R.SHANMUGAVEL	9
19	922120105019	M.SURIYA PRAKASH	8
20	922120105020	V.TAMILSELVAN	11
21	922120105021	H. THIRSATH DANIEL	10
22	922120105301	M.HARIPRASATH	12
23	922120105302	R.SHARAN KAILASH	10

Faculty Incharge



Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (NUS)

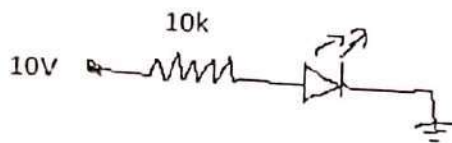
Principal

SSM Institute of Engineering and Technology
Kuttathupattu Village, Sindalagundu (Po),
Palani Road, Dindigul - 624 002

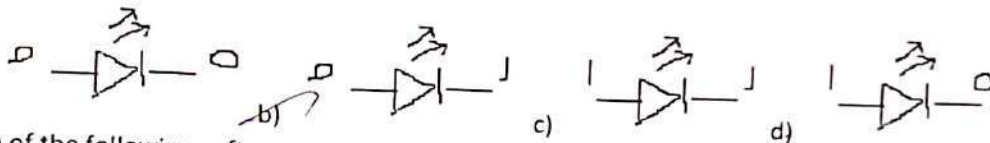
EMBEDDED SYSTEM

Choose the best:

- 1) How many Ports are there in PIC16F877A microcontroller
a) 3 b) 4 ~~c) 5~~ d) 6
- 2) Which of the following port of PIC16F877A has 3 pins only
~~a) RA~~ b) RB c) RD d) RE
- ✓ 3) What is the programming environment is used develop program for PIC microcontrollers
a) Keil b) Matlab c) Arduino ~~d) MP LAB~~
- ✓ 4) In the circuit find current through ideal LED
a) 1A ~~b) 1mA~~ c) 1 uA d) 100mA



- 5) Which LED will emit the light

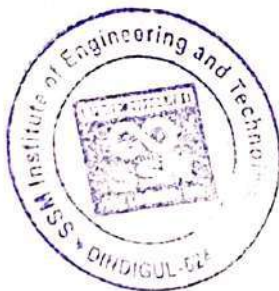


- ✓ 6) Which of the following software tool suite is primarily used by Electronic Design Automation Engineers
a) SCADA ~~b) Proteus design suite~~ c) Pro E d) AutoCAD
- ✓ 7) `int i; for(i=0;i<100;i++); print(i)`
In this program, i is printed as
~~a) 0,1,2.....99~~ b) 0,1,2.....100 c) 1,2,3...99 d) 1,2,3.....100
- ✓ 8) `Int a,b,c;`
`If (a=b);`
`print(0);`
`if (b=c);`
`print(1);`
`if (c=a);`
`print(2);`
`if (a=b=c);`
`print(3)`
In this program, the result value is 2 when
a) a=b b) b=c ~~c) c=a~~ d) a=b=c
- 9) In which of the following LED can work properly
a) DC voltage b) AC voltage ~~c) AC current~~ d) Both a and b
- ✓ 10) What is a compiler
a) Analog circuit that reduces the voltage level in output
b) Digital circuit that reduces the voltage level in output
~~c) Tool which is used to convert the programming language into machine language~~
d) None of the above



Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (NUS)
Principal
SSM Institute of Engineering and Technology
Kuttathupattu Village, Sindalagundu (Po),
Palani Road, Dindigul - 624 002

- 11) Which of the following define the RA port's 0th pin as output pin in PIC16F877A
 a) TRISA0=0 b) TRISA0=1 c) TRISA=0 d) TRISA=1
- ✓ 12) TRISB=0 means
 a) RB as input b) RB as output c) RBO as input d) RBO as output
- ✓ 13) What is the header file for PIC microcontrollers
 a) Pic.h b) Picic.h c) Cip.h d) Cipic.h
- ✗ 14) PIC expansion
 a) Peripheral Interface Controller
 b) Pictorial Indication Controller
 c) Peripheral interchange controller
 d) None of these
- 15) Which of the following Port of pic16f877a does not have 8 pins
 a) RA b) RB c) RC d) RD
- 16) What is the Hex Code to display "2" in 7 segment display(Common anode) assume dp as zero
 a) 02 b) ad c) da d) 24
- ✓ 17) What is the Hex Code to display "8" in 7 segment display(Common cathode) assume dp as zero
 a) Fe b) 00 c) ff d) 9a
- ✓ 18) If 10 MHz frequency signal is set as input to a microcontroller, What is time period of the controller
 a) 100 msec b) 1 msec c) 10 usec d) 1000 sec
- ✓ 19) In Arduino IDE delay(1000) command makes how much delay
 a) 1 sec b) 10 sec c) 1000 sec d) 0.1 sec
- ✓ 20) ESP8266 is a module
 a) Wi-Fi b) ISP c) GSM d) GPS



Dr.D.SENTHIL KUMARAN, M.E., P.E., (NUS)

Principal

SSM Institute of Engineering and Technology

Kuttathupatti Village, Sindalagundu (Po),

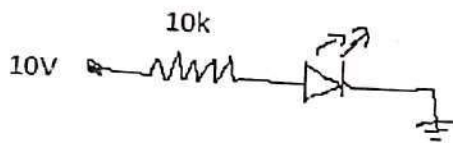
Palani Road, Dindigul - 624 002.

EMBEDDED SYSTEM

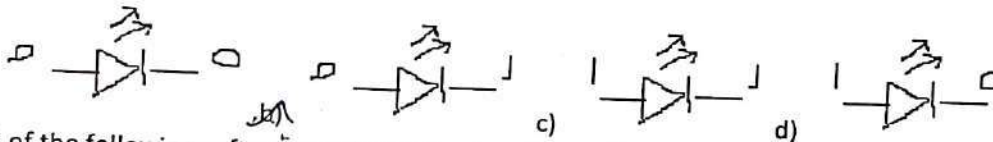
Choose the best:

12
20
Roh

- ✓ 1) How many Ports are there in PIC16F877A microcontroller
a) 3 b) 4 ☒ c) 5 d) 6
- 2) Which of the following port of PIC16F877A has 3 pins only
☒ a) RA b) RB c) RD d) RE
- ✓ 3) What is the programming environment is used develop program for PIC microcontrollers
a) Keil b) Matlab c) Arduino ☒ d) MP LAB
- 4) In the circuit find current through ideal LED
a) 1A ☒ b) 1mA c) 1 μ A d) 100mA



- 5) Which LED will emit the light



- 6) Which of the following software tool suite is primarily used by Electronic Design Automation Engineers
a) SCADA ☒ b) Proteus design suite c) Pro E d) AutoCAD

7) `int i; for(i=0;i<100;i++); print(i)`
In this program, i is printed as

- ☒ a) 0,1,2.....99 b) 0,1,2.....100 c) 1,2,3...99 d) 1,2,3.....100

8) `int a,b,c;
if (a=b);
print(0);
if (b=c);
print(1);
if (c=a);
print(2);
if (a=b=c);
print(3)`

In this program, the result value is 2 when

- a) a=b b) b=c ☒ c) c=a d) a=b=c

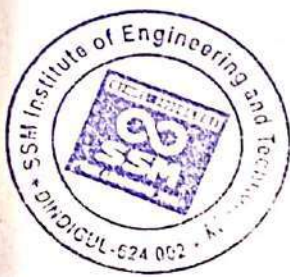
9) In which of the following LED can work properly

- ☒ a) DC voltage b) AC voltage c) AC current d) Both a and b

10) What is a compiler

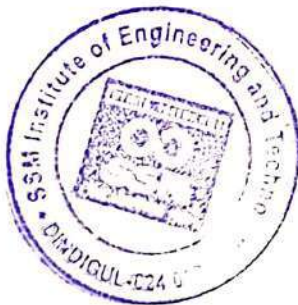
- a) Analog circuit that reduces the voltage level in output
b) Digital circuit that reduces the voltage level in output
☒ c) Tool which is used to convert the programming language into machine language
d) None of the above

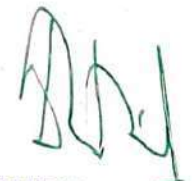
Roh



Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (NOC)
Principal
SSM Institute of Engineering and Technology
Kuttathupatti Village, Sindalagundi (H)
Palani Road, Dindigul - 624 002

- 11) Which of the following define the RA port's 0th pin as output pin in PIC16F877A
 a) TRISA0=0 b) TRISA0=1 ☒ TRISA=0 d) TRISA=1
- 12) TRISB=0 means
 a) RB as input ☒ RB as output c) RBO as input d) RBO as output
- 13) What is the header file for PIC microcontrollers
☒ Pic.h b) Picic.h c) Cip.h d) Cipic.h
- 14) PIC expansion
 a) Peripheral Interface Controller
☒ Pictorial Indication Controller
 c) Peripheral interchange controller
 d) None of these
- 15) Which of the following Port of pic16f877a does not have 8 pins
 a) RA b) RB c) RC ☒ RD
- 16) What is the Hex Code to display "2" in 7 segment display(Common anode) assume dp as zero
 a) 02 ☒ ad c) da d) 24
- 17) What is the Hex Code to display "8" in 7 segment display(Common cathode) assume dp as zero
 a) Fe b) 00 ☒ ff d) 9a
- 18) If 10 MHz frequency signal is set as input to a microcontroller, What is time period of the controller
☒ 100 msec ☒ 1 msec c) 10 usec d) 1000 sec
- 19) In Arduino IDE delay(1000) command makes how much delay
☒ 1 sec b) 10 sec c) 1000 sec d) 0.1 sec
- 20) ESP8266 is a module
☒ Wi-Fi b) ISP c) GSM d) GPS



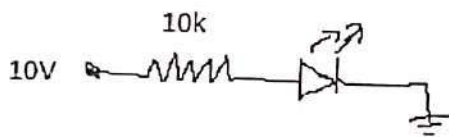

 Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (NUS)
 Principal
 SSM Institute of Engineering and Technology
 Kuttathupatti Village, Sindalagundam,
 Palani Road, Dindigul - 624 002.

EMBEDDED SYSTEM

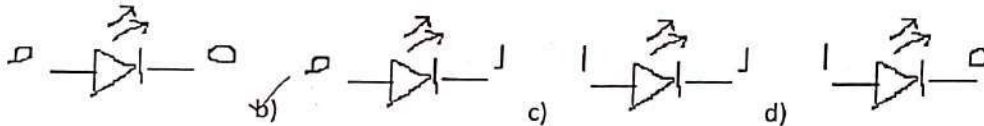
Choose the best:

09
20
Raj

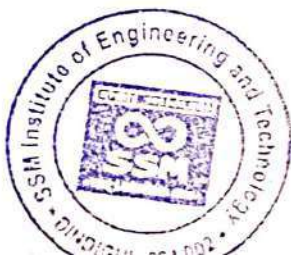
- 1) How many Ports are there in PIC16F877A microcontroller
a) 3 b) 4 c) 5 d) 6
- 2) Which of the following port of PIC16F877A has 3 pins only
a) RA b) RB c) RD d) RE
- 3) What is the programming environment is used develop program for PIC microcontrollers
a) Keil b) Matlab c) Arduino d) MP LAB
- 4) In the circuit find current through ideal LED
a) 1A b) 1mA c) 1 μ A d) 100mA



- 5) Which LED will emit the light



- 6) Which of the following software tool suite is primarily used by Electronic Design Automation Engineers
a) SCADA b) Proteus design suite c) Pro E d) AutoCAD
- 7) `int i; for(i=0; i<100; i++); print(i)`
In this program, i is printed as
a) 0,1,2.....99 b) 0,1,2.....100 c) 1,2,3....99 d) 1,2,3.....100
- 8) `int a,b,c;`
`if (a=b);`
`print(0);`
`if (b=c);`
`print(1);`
`if (c=a);`
`print(2);`
`if (a=b=c);`
`print(3);`
In this program, the result value is 2 when
a) a=b b) b=c c) c=a d) a=b=c
- 9) In which of the following LED can work properly
a) DC voltage b) AC voltage c) AC current d) Both a and b
- 10) What is a compiler
a) Analog circuit that reduces the voltage level in output
b) Digital circuit that reduces the voltage level in output
c) Tool which is used to convert the programming language into machine language
d) None of the above



Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (IIS)

Principal


SSM Institute of Engineering and Technology

Kuttathupatti Village, Sindalagudi

Palani Road, Dindigul 624 001

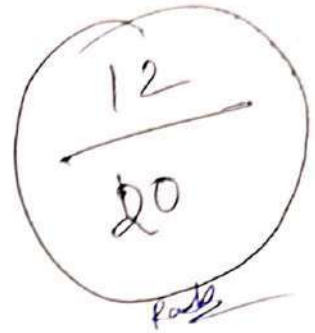
- 11) Which of the following define the RA port's 0th pin as output pin in PIC16F877A
 a) ☒ TRISA0=0 b) TRISA0=1 c) TRISA=0 d) TRISA=1
- 12) TRISB=0 means
 a) RB as input b) RB as output ☒ RB0 as input d) RB0 as output
- 13) What is the header file for PIC microcontrollers
 a) ☒ Pic.h b) Picic.h c) Cip.h d) Cipic.h
- 14) PIC expansion
 a) Peripheral Interface Controller
 b) ☒ Pictorial Indication Controller
 c) Peripheral interchange controller
 d) None of these
- 15) Which of the following Port of pic16f877a does not have 8 pins
 a) RA b) RB ☒ RC d) RD
- 16) What is the Hex Code to display "2" in 7 segment display(Common anode) assume dp as zero
 a) 02 b) ad c) da ☒ 24
- 17) What is the Hex Code to display "8" in 7 segment display(Common cathode) assume dp as zero
 a) Fe b) 00 ☒ ff d) 9a
- 18) If 10 MHz frequency signal is set as input to a microcontroller, What is time period of the controller
 a) 100 msec ☒ 1 msec c) 10 usec d) 1000 sec
- 19) In Arduino IDE delay(1000) command makes how much delay
 a) 1 sec b) 10 sec ☒ 1000 sec d) 0.1 sec
- 20) ESP8266 is a module
 a) ☒ Wi-Fi b) ISP c) GSM d) GPS



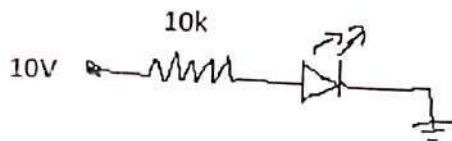

 Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (PUS)
 Principal
 SSM Institute of Engineering and Technology
 Euttathupattu Village, Sindalagundu (Po),
 Palani Road, Dindigul - 624 002.

EMBEDDED SYSTEM

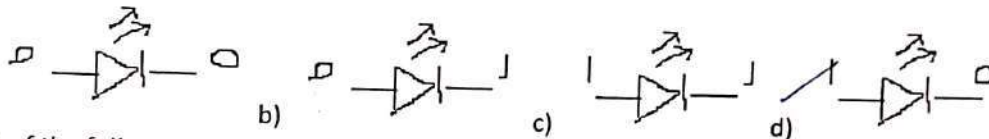
Choose the best:



- 1) How many Ports are there in PIC16F877A microcontroller
a) 3 b) 4 c) 5 d) 6
- 2) Which of the following port of PIC16F877A has 3 pins only
a) RA b) RB c) RD d) RE
- 3) What is the programming environment is used develop program for PIC microcontrollers
a) Keil b) Matlab c) Arduino d) MP LAB
- 4) In the circuit find current through ideal LED
a) 1A b) 1mA c) 1 uA d) 100mA



- 5) Which LED will emit the light



- 6) Which of the following software tool suite is primarily used by Electronic Design Automation Engineers
a) SCADA b) Proteus design suite c) Pro E d) AutoCAD

7) `int i; for(i=0;i<100;i++); print(i)`

In this program, i is printed as

- a) 0,1,2.....99 b) 0,1,2.....100 c) 1,2,3....99 d) 1,2,3.....100

8) `int a,b,c;`

```
if (a=b);
print(0);
if (b=c);
print(1);
if (c=a);
print(2);
if (a=b=c);
print(3)
```

In this program, the result value is 2 when

- a) a=b b) b=c c) c=a d) a=b=c

- 9) In which of the following LED can work properly

- a) DC voltage b) AC voltage c) AC current d) Both a and b

- 10) What is a compiler

- a) Analog circuit that reduces the voltage level in output
- b) Digital circuit that reduces the voltage level in output
- c) Tool which is used to convert the programming language into machine language
- d) None of the above



Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (MUS)

Principal

SSM Institute of Engineering and Technology

Kuttathupatti Village, Sindalagundi (Po),

Palani Road, Dindigul - 624 002

- 11) Which of the following define the RA port's 0th pin as output pin in PIC16F877A
 a) ☒ TRISA0=0 b) TRISA0=1 c) TRISA=0 d) TRISA=1
- 12) TRISB=0 means
 a) RB as input b) RB as output c) RBO as input d) ☒ RBO as output
- 13) What is the header file for PIC microcontrollers
 a) ☒ Pic.h b) Picic.h c) Cip.h d) Cipic.h
- 14) PIC expansion
 a) ☒ Peripheral Interface Controller
 b) Pictorial Indication Controller
 c) Peripheral interchange controller
 d) None of these
- 15) Which of the following Port of pic16f877a does not have 8 pins
 a) ☒ RA b) RB c) RC d) RD
- 16) What is the Hex Code to display "2" in 7 segment display(Common anode) assume dp as zero
 a) 02 b) ad c) ☒ da d) 24
- 17) What is the Hex Code to display "8" in 7 segment display(Common cathode) assume dp as zero
 a) Fe b) 00 c) ☒ ff d) 9a
- 18) If 10 MHz frequency signal is set as input to a microcontroller, What is time period of the control
 a) 100 msec b) ☒ 1 msec c) 10 usec d) 1000 sec
- 19) In Arduino IDE delay(1000) command makes how much delay
 a) ☒ 1 sec b) 10 sec c) 1000 sec d) 0.1 sec
- 20) ESP8266 is a module
 a) ☒ Wi-Fi b) ISP c) GSM d) GPS



Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (NUS)

Principal

SSM Institute of Engineering and Technology

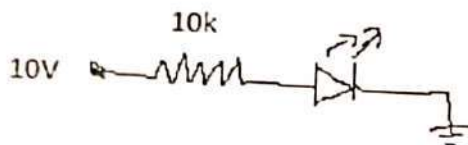
Kuttathupatti Village Sindalagundi (Po),

Palani Road, Dindigul - 624 002.

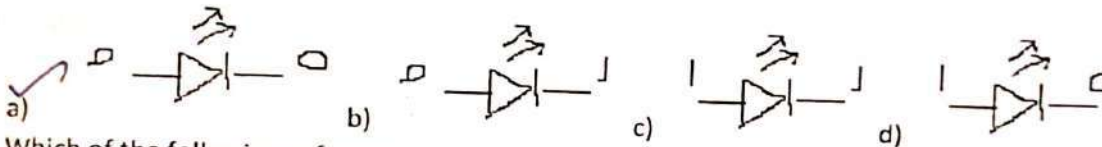
EMBEDDED SYSTEM SEM I ET.

Choose the best:

- 1) How many Ports are there in PIC16F877A microcontroller
 a) 3 b) 4 c) 5 d) 6
- 2) Which of the following port of PIC16F877A has 3 pins only
 a) RA b) RB c) RD d) RE
- 3) What is the programming environment is used develop program for PIC microcontrollers
 a) Keil b) Matlab c) Arduino d) MP LAB
- 4) In the circuit find current through ideal LED
 a) 1A b) 1mA c) 1 μ A d) 100mA



- 5) Which LED will emit the light



- 6) Which of the following software tool suite is primarily used by Electronic Design Automation Engineers
 a) SCADA b) Proteus design suite c) Pro E d) AutoCAD
- 7) `int i; for(i=0; i<100; i++); print(i)`
 In this program, i is printed as
 a) 0,1,2.....99 b) 0,1,2.....100 c) 1,2,3...99 d) 1,2,3.....100
- 8) `int a,b,c;`
`if (a=b);`
`print(0);`
`if (b=c);`
`print(1);`
`if (c=a);`
`print(2);`
`if (a=b=c);`
`print(3)`
 In this program, the result value is 2 when
 a) a=b b) b=c c) c=a d) a=b=c
- 9) In which of the following LED can work properly
 a) DC voltage b) AC voltage c) AC current d) Both a and b
- 10) What is a compiler
 a) Analog circuit that reduces the voltage level in output
 b) Digital circuit that reduces the voltage level in output
 c) Tool which is used to convert the programming language into machine language
 d) None of the above

10
 20
 Rasb

FEEDBACK FORM

Name: P.M. BALAJI

Department: EEE Year: II

Contact Number: 8838486520

Mail ID: balajipm3002@gmail.com

Native: Dindigul

Feedback about the program:

The time period was less but we gained some
basic informations of the Embedded system.

Signature: P.M. Balaji

Date: 28.05.22

Training on Embedded
System

FEEDBACK FORM

Name: H. Thiruvath Daniel

Department: EEE Year: II

Contact Number: 9500817539

Mail ID: thiruvathdaniel@gmail.com

Native: Ponjipakulam

Feedback about the program:

Useful and simply understandable.

Signature: H.T. Daniel

Date: 28/5/22



[Signature]
Dr.D.SEXTHIL KUMARAN, M.E., P.D. 2004
Principal
SSM Institute of Engineering and Technology
Luttathupatti Village, Sindalagundu (Po,
Palani Road, Dindigul - 624 002

FEEDBACK FORM

TRAINING ON EMBEDDED SYSTEM

Name: GleethanJali.T

Department: EEE Year: II

Contact Number: 9940928577

Mail ID: vinogeetha228@gmail.com

Native: MANAPPARAI

Feedback about the program:

It's useful to improve our
knowledge.

Signature: [Signature]

Date: 28.05.2022



FEEDBACK FORM

TRAINING ON EMBEDDED SYSTEM

Name: S.PREETHI

Department: EEE Year: II

Contact Number: 8072610205

Mail ID: preethisaramakumar@gmail.com

Native: DINDIGUL

Feedback about the program:

It's very useful session, I have learned lots of
new things.

Signature: [Signature]

Date: 28/05/22

[Signature]



Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (IITG)
Principal
SSM Institute of Engineering and Technology
Kuttathupatti Village, Sindalagundu (P),
Palani Road, Dindigul - 624 002

TRAINING ON EMBEDDED

FEEDBACK FORM

Name: R. SHARAN KAILASH

Department: EEE Year: II

Contact Number: 9080378704

Mail ID: sharankailash.80@gmail.com

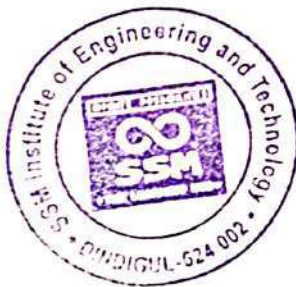
Native: DINDIGUL

Feedback about the program:

It is Useful for. update our extra.
skills

Signature: [Signature]

Date: 28.5.22



[Signature]
Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (Assoc)
Principal
SSM Institute of Engineering and Technology
Kuttathupatti Village, Sindalagundu (R),
Palani Road, Dindigul - 624 002



GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP



NSDC
National
Corporation

Transforming the skill landscape

CERTIFICATE

PROLIFIC

ASIA'S LARGEST INDUSTRIAL
TRAINING COMPANY

In recognition of the commitment to achieve Professional Excellence, it is certified that

R.SHARAN KAILASH

Has successfully completed Technological Teaching on "Embedded System" covering,

➤ **PIC Micro Controller**

Conducted for 6 days during the period 23.05.22 to 28.05.22 at

SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY - EEE Department, Dindigul.



Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (NUS)

Principal

SSM Institute of Engineering and Technology

Kuttathupatti Village, Sindalagundu (Po),

Palani Road, Dindigul - 624 002.

Director

PROLIFIC SYSTEMS & TECHNOLOGIES PVT. LTD.

- An Affiliate of Aref Group (Kuwait)
- Funded by Can Bank, VC Fund, owned by Canara Bank

Visit us at : www.prolificttraining.com

National Skill Development Corp. (Govt. of India) Approved Training Company



IAO - USA
Accredited Courses

An ISO 9001-2008
Certified Company

In recognition of the commitment to achieve Professional Excellence, it is certified that

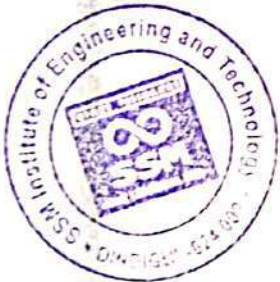
H. THIRSATH DANIEL

Has successfully completed Technological Teaching on "Embedded System" covering,

➤ **PIC Micro Controller**

Conducted for 6 days during the period 23.05.22 to 28.05.22 at

SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY - EEE Department, Dindigul.



PROLIFIC SYSTEMS & TECHNOLOGIES PVT. LTD.

- An Affiliate of Aref Group (Kuwait)
- Funded by Can Bank, VC Fund, owned by Canara Bank

Visit us at : www.prolificttraining.com

National Skill Development Corp. (Govt. of India) Approved Training Company



IAO - USA
Accredited Courses

Dr.D.SENTHIL KUMARAN, M.E., Ph.D., IAS,
Principal
SSM Institute of Engineering and Technology
Kottampatti Village, Sindalagundu (Po),
Palani Road, Dindigul - 624 002.

Dr. Senthil Kumaran

Director

An ISO 9001-2008
Certified Company

CERTIFICATE

In recognition of the commitment to achieve Professional Excellence, it is certified that

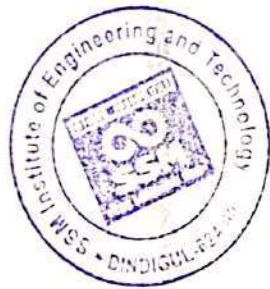
V.TAMILSELVAN

Has successfully completed Technological Teaching on "Embedded System" covering,

➤ **PIC Micro Controller**

Conducted for 6 days during the period 23.05.22 to 28.05.22 at

SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY - EEE Department, Dindigul.



PROLIFIC SYSTEMS & TECHNOLOGIES PVT. LTD.

- An Affiliate of Aref Group (Kuwait)
- Funded by Can Bank, VC Fund, owned by Canara Bank

Visit us at : www.prolificttraining.com

National Skill Development Corp. (Govt. of India) Approved Training Company



IAO - USA
Accredited Courses

Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (NUS)
Principal
SSM Institute of Engineering and Technology
Kuttathupatti Village, Sindalagundu (Po),
Palani Road, Dindigul - 624 002

(Signature)
Director

An ISO 9001-2008
Certified Company

CERTIFICATE

In recognition of the commitment to achieve Professional Excellence, it is certified that

M.SURIYA PRAKASH

Has successfully completed Technological Teaching on "Embedded System" covering,

➤ **PIC Micro Controller**

Conducted for 6 days during the period 23.05.22 to 28.05.22 at

SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY - EEE Department, Dindigul.



PROLIFIC SYSTEMS & TECHNOLOGIES PVT. LTD.

- An Affiliate of Aref Group (Kuwait)
 - Funded by Can Bank, VC Fund, owned by Canara Bank
- Visit us at : www.prolificttraining.com
National Skill Development Corp. (Govt. of India) Approved Training Company



IAO - USA
Accredited Courses

Dr. D. Senthil Kumaran, M.E., Ph.D., (MOS)
Principal
SSM Institute of Engineering and Technology
Kuttathupatti Village, Sindalagundu (Po),
Palani Road, Dindigul - 624 002.

Dr. R. Balasubramanian
Director

An ISO 9001-2008
Certified Company

In recognition of the commitment to achieve Professional Excellence, it is certified that

R.SHANMUGAVEL

Has successfully completed Technological Teaching on "Embedded System" covering,

➤ **PIC Micro Controller**

Conducted for 6 days during the period 23.05.22 to 28.05.22 at

SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY - EEE Department, Dindigul.



PROLIFIC SYSTEMS & TECHNOLOGIES PVT. LTD.

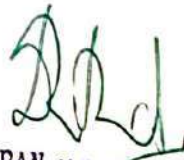
- An Affiliate of Aref Group (Kuwait)
- Funded by Can Bank, VC Fund, owned by Canara Bank

Visit us at : www.prolificttraining.com

National Skill Development Corp. (Govt. of India) Approved Training Company



IAO - USA
Accredited Courses


Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (NUS)
Principal
SSM Institute of Engineering and Technology
Kuttalupathi Village, Sindalagundu (Po),
Palani Road, Dindigul - 624 002.


Director

An ISO 9001-2008
Certified Company