



Guru Nanak Educational Society's
**GURU NANAK INSTITUTE
OF ENGINEERING & TECHNOLOGY**

APPROVED BY AICTE, DTE & AFFILIATED TO RTM NAGPUR UNIVERSITY, NAGPUR
Dahegaon, Opp IOC Petrol pump, Kalmeshwar Road, Nagpur - 441501 Ph. 07118-661400
Website: www.gniet.ac.in E-mail: gnietnagpur@gmail.com



List of Activities under MoUs during the year 2019-20

Sr. No	Name of the MoU / Collaboration / linkage	Name of the Department	Year of signing MoU / collaboration / linkage	Duration of MoU / collaboration / linkage	List the actual activities under each MOU
1	Prolific Systems & Technologies Pvt. Ltd.	Electrical Engineering	2018-19	3 Year	7 day Workshop
2	Embedded Creations Educational Wing of RM group of companies	Electronics & Telecommunication Engineering	2018-19	3 Year	Hands on workshop



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NOTICE


All the students of IV/VI/VIII semester are hereby informed that workshop (PLC & SCADA) Prolific at Nagpur is scheduled on 10/03/2020-17/03/2020. The students are present for the 7-Day workshop.

Workshop is compulsory for all students in IVRW subject. The schedule is given below

Date	Scheduled of Workshop
10/03/2020-17/03/2020	IV/VI/VIII Semester

It is compulsory to all Semester students to be present for Workshop.


Prof. R.M. Bhombe
H.O.D


Principal
Guru Nanak Institute of Engineering &
Technology Nagpur- 441501

**Department Of Electrical Engineering
Session.2019-20**

Date: 11/02/2018

REPORT ON WORKSHOP

Department of Electrical Engineering organized a workshop on “Industrial Automation”(PLC& SCADA) for students of IV, VI and VIII-Sem (EE) on 10/03/2020 to 17/03/2020 in the Seminar Hall, T-2 Building GNIT, Nagpur. Seminar was presented by Mr. Sarang Thakre, M/S Prolific System & Technologies Pvt. Ltd, Nagpur.

Mr. Sarang Thakre introduced students about “PLC & SCADA”. He briefly explained the components, architecture, working, benefits and scope of PLC SCADA automation and mainly focused on following topics from the undergraduate student point of view.

- Need and importance of automation
- Need of PLC
- Reputed companies working with PLC
- Real time application of PLC
- SCADA system and object
- DCS (Distributed Control System)
- Advantage of automation

PLC (Programmable Logic Controllers) are integral part of factory automation and industrial process control. Applications of PLCs are from simple lighting to chemical processing plants. Now a day's automation system contains PLCs and SCADA (Supervisory Control and Data Acquisition) software. The combination offers better monitoring and control of the plant. PLC and SCADA are important tools of Automation industry. Professionally trained candidates in PLC and SCADA have better job prospects as it is the most desired requirement of industry.

About 39 students attended the seminar. Faculties of Electrical department were present in the seminar. Students were grateful to the department for organising the seminar from which they could acquire knowledge of PLC SCADA Automation. The seminar was co-ordinated by Prof. Akshay Pillewan.



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Figure 1 Certificate distribution by staff



Prof. Akshay Pillewan
 Workshop Co-ordinator

[Signature]
Prof. R. M. Bhombe
 Vice principal & HOD EE

[Signature]
Principal
 Guru Nanak Institute of Engineering &
 Technology Nagpur- 441501

Attendance

Sr.No.	Name of Students	
1	Babli Gemraj Nandanwar	Babli
2	Dipali Shamrao Surjagade	Dipali
3	Ganesh Ashokrao Burile	Ganesh
4	Gyanesh Chandrashekhar Deshmukh	G. Deshmukh
5	Ritik Rajeshwar Gedam	R. R. Gedam
6	Shraddha Shobhelal Samrit	Shraddha
7	Siddhant Ashok Dongare	S. A. Dongare
8	Sonali Dhiwaru Chalakh	Sonali
9	Sumit Kailash Kathe	Sumit
10	Surendra Raju Kasdekar	Surendra
11	Kalyani Sambhaji Wankhede	Kalyani
12	Sneha Dnyaneshwar Shete	Sneha
13	Ramteke Simran Robin	Simran
14	Tabhane Priya Dharmadas	Priya
15	Aashwini Vinodsingh Thakur	Aashwini
16	Ab, Rahil Ab. Rafiq Sheikh	Ab. Rahil
17	Abhijeet Jivan Naitam	Abhijeet
18	Achal Parimallal Thakur	Achal
19	Aditi Rajendra Rane	Aditi
20	Ajay Rahul Walde	Ajay
21	Akanksha Siddharth Meshram	Akanksha
22	Akash Sudhakar Deshmukh	Akash
23	Akshay Arun Nakade	Akshay
24	Akshay Kumar	Akshay
25	Akshay Ashok Masle	Akshay
26	Amol Abhimanyu Patil	Amol
27	Anjali Ganesh Chhaparghare	Anjali
28	Aashwini Vinodsingh Thakur	Aashwini
29	Ab, Rahil Ab. Rafiq Sheikh	Ab. Rahil
30	Abhijeet Jivan Naitam	Abhijeet
31	Achal Parimallal Thakur	Achal
32	Aditi Rajendra Rane	Aditi

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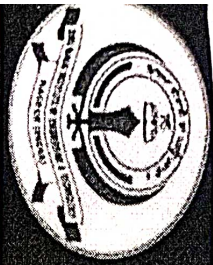
33	Ajay Rahul Walde	<u>A Walde</u>
34	Akanksha Siddharth Meshram	
35	Akash Sudhakar Deshmukh	<u>A Deshmukh</u>
36	Akshay Arun Nakade	
37	Akshay Kumar	<u>A. Kumar</u>
38	Akshay Ashok Masle	
39	Amol Abhimanyu Patil	<u>Amol</u>
40	Anjali Ganesh Chhaparghare	<u>Anjali</u>
41	Pankaj Mithileshprasad Tiwari	
42	Pankaj Rajendra Jugssaniya	<u>Pankaj</u>
43	Pankajkumar Hauslal Ambule	
44	Pooja Maroti Dhamdar	<u>Pooja</u>


Prof. R.M. Bhombe

HOD EE


Principal

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GURU NANAK INSTITUTE OF ENGINEERING & TECHNOLOGY

Workshop
on

**"HANDS ON WORKSHOP ON EMBEDDED
SYSTEM"**

Venue: T2
Auditorium

- Organized by
Department of
Electronics and Telecommunication
- Engg. in association with
 - R&D Cell, GNIET

Date
05/05/2020
Time
10.00 am

Prof. D. Deshpande
Co ordinator

Prof. Sucheta Raut
HOD,ETC,GNIET

Dr. S. Srivastava
Principal
GNIET





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Invitation Letter

To,
Mr. Deny Bobade
General Manager
Embedded creation Nagpur

01/05/2020

Dear sir

GNIET, Nagpur established in 2007 by GNES society is one of the top Engineering Colleges affiliated to RTMNU, Nagpur, approved by All India Council for Technical Education, New Delhi and Director of Technical Education, Maharashtra, accredited by National Assessment and Accreditation Council and certified by ISO. GNIET offers best quality technical education to produced skilled technical manpower meeting international standards and global requirements ensuring optimal utilization of available resources. We are committed to nurture the required expertise under one roof by creating competent and motivated technocrats and managers of tomorrow, who will use their technical knowledge and managerial qualities to confidently and successfully lead the organization.

It's my pleasure to inform you that, Electronics and Telecommunication Department in collaboration with , Research and Development Cell and Institute Innovation Council, GNIET is organizing One Day workshop on Hands on workshop on Embedded System. We are delighted to invite you to conduct technical session during this visit to enlighten our faculty members and students with your valuable knowledge of Embedded Technology..

We hope you will accept our request for this invitation and help our faculties and students to gather knowledge about Embedded Design & application in Electronics Engineering.

Following are the details of your schedule.

Topic of workshop: Hands on workshop on Embedded System

Date: -05/05/2020

Time: -10.00 am onwards

Thank & Regards,

Principal,
GNIET Nagpur

Principal
Guru Nanak Institute of
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Department of Electronics and Telecommunication Engineering

Session 2019-20

Date:-04/05/2020

NOTICE

All the Students of GNIET (ETC, CSE, EE) are here by informed that the Department of Electronics and Telecommunication Engineering is organizing a one day online workshop on "Hands on workshop on Embedded System" on **05/05/2019** at **10.00 a.m.**

So it is mandatory for students to attend the same.

Venue: T2 Auditorium Hall, GNIET, Nagpur

Time 10.00 am

Prof. Deepak Deshpande

Co ordinator

Principal

Prof. Sucheta Raut

HOD,ETC

Copy to (information):-

1. Hon. Chairman, GNES
2. Hon. Principal, GNIET
3. Vice. Principal, GNIET
4. All HOD'S in various Department of GNIET

Principal
Guru Nanak Institute of
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Nagpur-441501



Academic Year 2019-20-

Report on

Hands on workshop on Embedded system

Date:05/05/2020

Activity under MOU signed between Embedded Creations & GNIET

Resource person: Mr. Deny Bobade, Director, Embedded Creations, Nagpur

Co-ordinator: Mr. Deepak Deshpande, Asst. Professor, ETC, Nagpur

Duration : One Day

Hands-on experience with embedded systems can yield several objective outcomes, including:

Programming Skills: Improved proficiency in programming languages commonly used in embedded systems development, such as C, C++, or Python.

Hardware Understanding: Better understanding of microcontrollers, sensors, actuators, and other hardware components commonly used in embedded systems.

Interfacing Knowledge: Ability to interface peripherals and devices with microcontrollers, such as UART, SPI, I2C, GPIO, etc.

Real-time Systems Understanding: Understanding of real-time constraints and considerations in embedded systems development, such as timing, interrupts, and multitasking.

Debugging Skills: Enhanced ability to debug embedded systems issues using tools like oscilloscopes, logic analyzers, and debuggers.

Prototyping Proficiency: Skill in designing and prototyping embedded systems solutions to solve real-world problems.

Project Management: Experience in managing embedded systems projects, including requirements gathering, design, implementation, testing, and deployment.


Documentation and Reporting: Ability to document the design, implementation, and testing processes effectively, as well as to report findings and results clearly.

Integration Skills: Knowledge of integrating different hardware and software components into a cohesive embedded system solution.

Optimization Techniques: Understanding of optimization techniques for embedded systems, including power optimization, memory optimization, and performance optimization.

About workshop:

The six day intensive workshop on embedded systems conducted by Embedded Creations, Nagpur to involve students in a cohesive drive with the academia and industry towards excellence in embedded systems technology. This workshop is an attempt to cover material relevant to giving students necessary knowledge and skill set to appreciate


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the rapid changing scenario in embedded systems and take advantage of this in furthering their career. Practical/laboratory sessions are held, which will supplement the knowledge disseminated during the lecture sessions with adequate hands on experience.

Skills Gained

After completing this workshop, students are able to:

- Target and optimize 8 bit microcontrollers by using Embedded C and assembly language Target and optimize 8 bit PIC by using Embedded C
- Create and manage designs by using the Keil software design environment Interface external peripherals such as motor driver, keypad, LCD etc

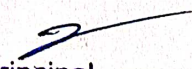
Course content:

Micro-controller design using C:

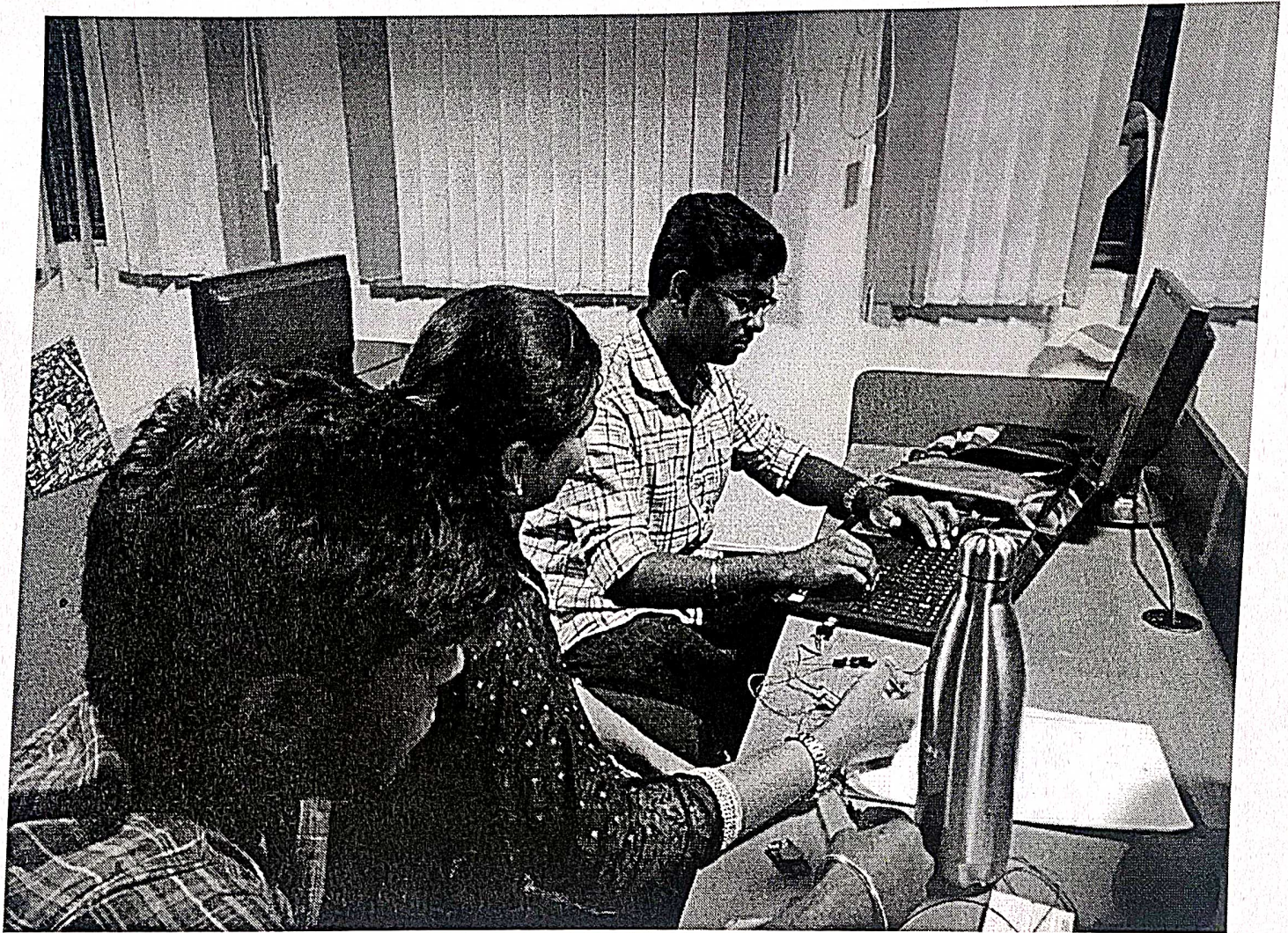
- 1) Pin Diagram, Block Diagram 8051, Timing and Clock, Reset circuit
- 2) Memory Architecture
- 3) Addressing Modes
- 4) LED interfacing, Multiplexing 7-segment Display
- 5) Keypad Scanning without interrupt
- 6) Timer, Counter and serial communication
- 7) LCD interfacing,
- 8) UART and RS232 Interfacing

ARM [Advanced Risk Machine]


- 1) Features in RISC Architecture: - From hardware Point of view.
- 2) ARM Processor architecture
- 3) ARM Organization and implementation,
- 4) 3-Stage Pipeline, ARM Organization, Memory format, Memory Management,
- 5) Use of ARM based IDE Project creation, Compilation, Debugging,
- 6) Downloading code hex file into the ARM based Philips microcontrollers
- 7) Use of port and serial interface provided into the chip

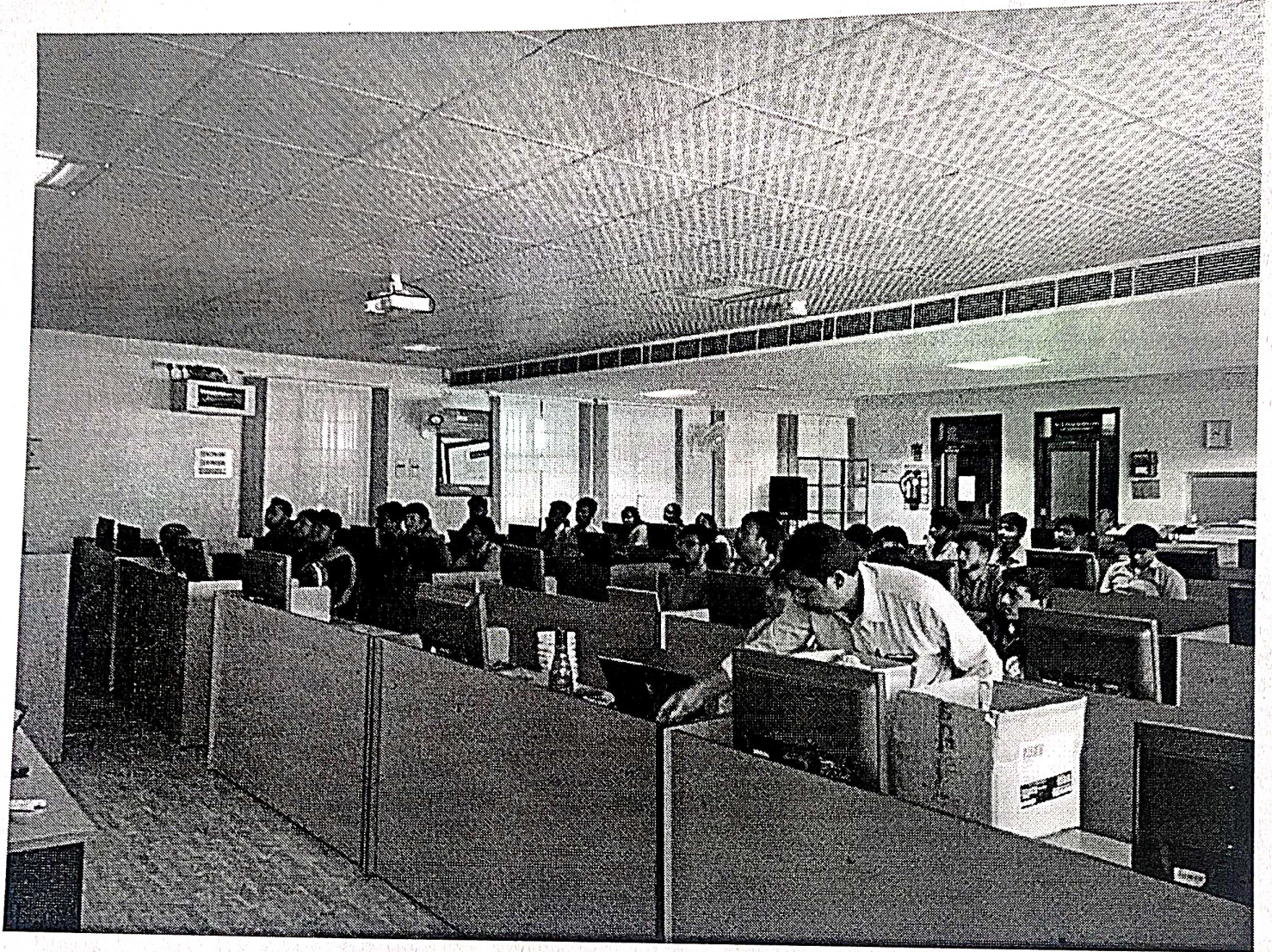

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- 8) ARM processor core ARM7TDMI
- 9) Instruction set, Interfacing of LED
- 10) Interfacing LCD, Timer, serial communication, RTC, Interrupt



Students attending the workshop on Embedded technology on 05/05/2020 at GNIET


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Participants of workshop Hands on workshop on Embedded System on 05/05/2020 at GNIET

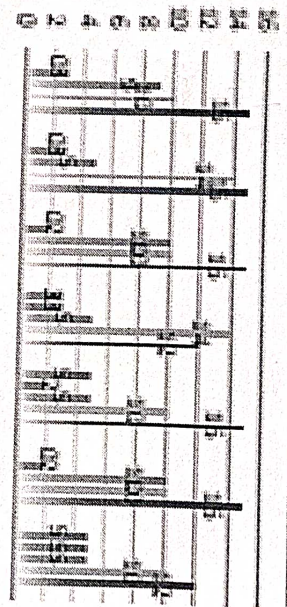
Prof. Deepak Deshpande
Co ordinator

Prof. Sucheta Raut
HOD,ETC

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Nagpur-441501

Enter the number between 1-5 where 5 Means Strongly Agree and 1 Means Strongly Disagree

10	The venue was comfortable	1	2	3	4	5		
11	The content was relevant	0	3	9	10	15		
12	The event content was easy to understand	0	3	5	14	15		
13	The content was comprehensive	0	2	10	10	15		
14	The event handouts supported presentation	3	3	5	14	12		
15	Event provided useful additional information	5	2	5	10	15		
16	The activities were useful learning experiences	0	2	10	10	15		
17		5	5	5	10	12		
18								
19								
20								
21								
22								
23								
24								



The venue was comfortable
 The content was relevant
 The event content was easy to understand
 The content was comprehensive
 The event handouts supported presentation
 The activities were useful learning experiences

Handwritten signature/initials

Title: **HANDS ON EMBEDDED SYSTEM**

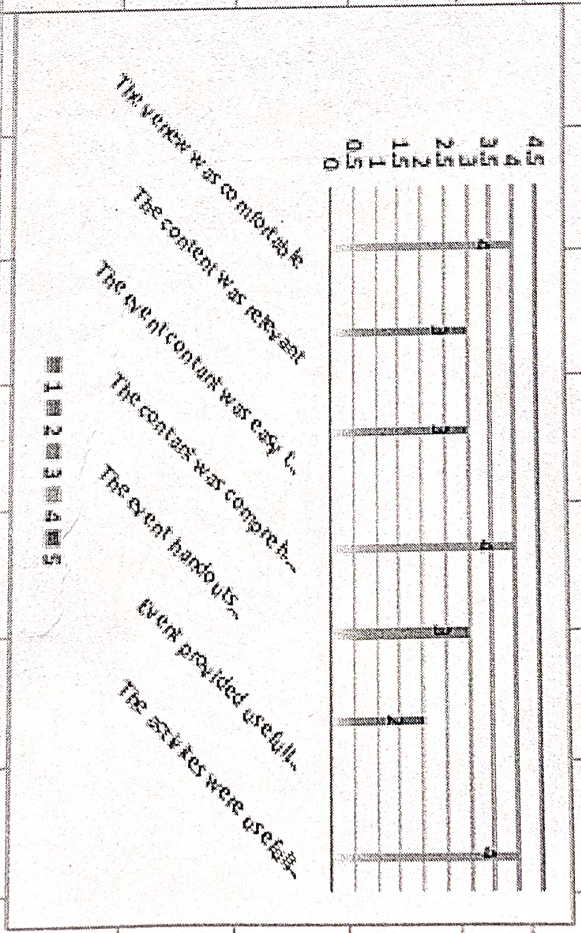
Date 05/05/2020

Name of student: AKASH AVADHESH CHAVAN

37

Enter the number between 1-5 where 5 Means Strongly Agree and 1 Means Strongly Disagree

9		1	2	3	4	5
10	The venue was comfortable					
11	The content was relevant			3	4	
12	The event content was easy to understand			3		
13	The content was comprehensive				4	
14	The event handouts supported presentation			3		
15	Event provided useful additional information		2			
16	The activities were useful learning experiences				4	
17						
18						
19						
20						



Rawl

ATTENDANCE SHEET 2019-20

Date: 05/05/

Name of seminar/workshop:

Hands on workshop on Embedded system.

Sr no.	Name of student	Signature
1	AKASH PRAMOD MOON	Akash Moon
2	AKSHATA SUNIL KAMBLE	Akambale
3	ANKITA ANAND TAMGADGE	Atamgaje
4	ANKITA KHUSHAL KALAMKAR	Kalamkar
5	ARBAJ SIDDIQUI	ARBAJ
6	ASHWINI . BURDE	Ashwini
7	BHARTI DILIP KOTHEKAR	Bharkar
8	BHAVNA SHANTARAM BHURSE	Bhursar
9	CHINMAY DILIP WANKAR	Chinmay
10	DIVYA ARVIND GAJBHIYE	Dwajbhaye
11	POOJA SANJAY BHOYAR	Pooja
12	POOJA SHAMKANT GHANORKAR	Ghanorkar
13	AASHIRWAD NAMDEO SAHARE	Asherwad
14	AJINKYA RAMESHWAR KOTHE	Ajinkya
15	AJINKYA SHANKAR DIGRASE	ADigrase
Sr no.	Name of student	Signature
16	AKASH AVDHESH CHAVHAN	Akash
17	AKSHAY KAPILESHWAR SAKHARE	Akshay
18	ALPESH PANJAB BOMBATE	Alpesh
19	AMOL DNYANESHWAR THAKRE	Amol
20	ANIL GANRAJ MOHITE	Anil Mohite
21	ANUJA RAVI THOOL	Anuja Thool

S. Prabhakar



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ATTENDANCE SHEET 2019-20

Date: _____

Name of seminar/workshop: _____

Hands on workshop on Embedded systems

22	BALAJI DNYANOBA BORGAVE	
23	BHAVIK DILIPRAO BHENDE	Bhavya
24	NEHAL ANAND SONE	(NS)
25	NIKHIL KISHOR MANKAR	N. Mankar
26	NIKHIL MITHARAM DHOTE	(NR)
27	NIKHIL TANAJI CHARDE	Dohem
28	NIRMAL PANDURANG SHENDE	(NS)
29	NITESH DEVIDAS DABARE	N. TANAJI
30	POOJA MAROTI DHAMDAR	Nitish Dabare
31	PRAJKTA ARUN CHAWARE	(PM)
32	PRANALI ARUNRAO BEHARE	Pranali
33	PRANALI VINOD DONGRE	Behara P
34	PRANIK SUNIL DONGARE	PRD
Sr.no	Name of students	
35	PRATIK RAJKUMAR SAWANE	
36	PRATIKSHA BUDHAN SONARE	P. Kumar
37	PRATIKSHA PRAKASH BHOYAR	P. Budhan
38	PRAVIN MANOHAR DESHMUKH	(P)

Sr no.	Name of student	Signature
39	PRIYA MAHADEV KHAJURIYA	Priya

P. Raut