St. ANNE'S

COLLEGE OF ENGINEERING AND TECHNOLOGY

(A Unit of the Sisters of St. Anne, Trichy)
(Approved by AICTE, New Delhi, Affilliated to Anna University, Chennai)
(ISO 9001: 2015 Certified Institution)
ANGUCHETTYPALAYAM, PANRUTI - 607 106.

ATTENDANCE AND ASSESSMENT RECORD

Name of the Staff : R. RADHAKRISHNAN

Department of the Staff : ECE

Semester/ Subject : V / MPMC

Period : AUG'2020 TO NOV'2020

ST. ANNE'S COLLEGE OF ENGINEERING AND TECHNOLOGY
(Approved by AICTE, New Delhi. Affiliated to Anna University, Chennai)
ANGUCHETTYPALAYAM, PANRUTI – 607 106.

EE8551 MICROPROCESSORS AND MICROCONTROLLERS **L T P C**
3 0 0 3

OBJECTIVES:

- Architecture of µP8085 & µC 8051
- Addressing modes & instruction set of 8085 & 8051.
- Need & use of Interrupt structure 8085 & 8051.
- Simple applications development with programming 8085 & 8051

UNIT I 8085 PROCESSOR **9**

Hardware Architecture, pinouts – Functional Building Blocks of Processor – Memory organization – I/O ports and data transfer concepts– Timing Diagram – Interrupts.

UNIT II PROGRAMMING OF 8085 PROCESSOR **9**

Instruction -format and addressing modes – Assembly language format – Data transfer, data manipulation& control instructions – Programming: Loop structure with counting & Indexing – Look up tability - Subroutine instructions - stack.

UNIT III 8051 MICRO CONTROLLER **9**

Hardware Architecture, pinouts – Functional Building Blocks of Processor – Memory organization – I/O ports and data transfer concepts– Timing Diagram – Interrupts- Data Transfer, Manipulation, Control Algorithms& I/O instructions, Comparison to Programming concepts with 8085.

UNIT IV PERIPHERAL INTERFACING **9**

Study on need, Architecture, configuration and interfacing, with ICs: 8255, 8259, 8254, 8279, - A/D and D/A converters &Interfacing with 8085& 8051.

UNIT V MICRO CONTROLLER PROGRAMMING & APPLICATIONS **9**

Simple programming exercises- key board and display interface –Control of servo motor- stepper motor control-Application to automation systems.

TEXT BOOKS:

1. Sunil Mathur &Jeebananda Panda, "Microprocessor and Microcontrollers", PHI Learning Pvt. Ltd, 2016.
2. R.S. Gaonkar, 'Microprocessor Architecture Programming and Application', with 8085, Wiley Eastern Ltd., New Delhi, 2013.
3. Muhammad Ali Mazidi & Janice Gilli Mazidi, R.D.Kinely 'The 8051 Micro Controller and Embedded Systems', PHI Pearson Education, 5th Indian reprint, 2003.

REFERENCES

1. Krishna Kant, "Microprocessor and Microcontrollers", Eastern Company Edition, Prentice Hall of India, New Delhi, 2007.
2. B.RAM," Computer Fundamentals Architecture and Organization" New age International Private Limited, Fifth edition, 2017.
3. Soumitra Kumar Mandal, Microprocessor & Microcontroller Architecture, Programming& Interfacing using 8085,8086,8051,McGraw Hill Edu,2013.
4. Ajay V.Deshmukh, 'Microcontroller Theory &Applications', McGraw Hill Edu,2016
5. Douglas V.Hall, 'Microprocessor and Interfacing', McGraw Hill Edu,2016

Name of the Staff : R.RADHAKRISHNAN

Department of the Staff : ECE

Department of the Student : EEE

Semester : V - SEM

Subject Code & Name : EE8551-MICROPROCESSORS & MICROCONTROLLERS

Period **From** : AUG' 2020 to NOV' 2020

To be Signed at the end of the each Assessment

Assessment Report	CIA-I	CIA-II	CIA-III
Assessment Date	8.09.20	24.09.20	20.10.20
Report Due on	8.09.20	24.09.20	21.10.20
Sign of HOD with Date	8/9	24/9	21/10

To be Signed at the end of the Semester

Staff in - charge	HOD of Staff	HOD of Students	Principal
12/11/2020	12/11/2020	16/11/2020	18.11.20

ATTENDANCE

Sl No.	Reg. No.	Name	Date													
			17	17	17	24	24	24	31	31	31	5	5	5	7	7
		Month	8	8	8	8	8	8	8	8	8	9	9	9	9	9
		Period	4	5	6	4	5	6	4	5	6	4	5	6	4	5
1.	42211810 9001	AARTHI ROJA . J	/	/	/	/	/	/	/	/	/	/	/	/	/	/
2.	004	ANBUMANI . B	/	/	/	/	/	/	/	/	/	/	/	/	/	/
3.	005	BHUVANESHWARAN . A	/	/	/	/	/	/	/	/	/	/	/	/	/	/
4.	006	BOOBATHI . C	/	/	/	/	/	/	/	/	/	/	/	/	/	/
5.	007	EASWARI . M	/	/	/	/	/	/	/	/	/	/	/	/	/	/
6.	008	KALAIPRIYAN S	/	/	/	/	/	/	/	/	/	/	/	/	/	/
7	009	KANNAN . S	/	/	/	/	/	/	/	/	/	/	/	/	/	/
8	013	MOHANRAJ . K	/	/	/	/	/	/	/	/	/	/	/	/	/	/
9.	014	MURALIKRISHNAN . M	/	/	/	/	/	/	/	/	/	/	/	/	/	/
10.	015	NAVEENKUMAR . C	/	/	/	/	/	/	/	/	/	/	/	/	/	/
11	016	NIVETHA M	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12	017	PIEOREX A	/	/	/	/	/	/	/	/	/	/	/	/	/	/
13	018	RASU R	/	/	/	/	/	/	/	/	/	/	/	/	/	/
14	019	SAMPATHKUMAR . G	/	/	/	/	/	/	/	/	/	/	/	/	/	/
15	020	SIVAPRIYA . S	/	/	/	/	/	/	/	/	/	/	/	/	/	/
16	021	SRILEKHA . K	/	/	/	/	/	/	/	/	/	/	/	/	/	/
17	022	SURENDHAR . K	/	/	/	/	/	/	/	/	/	/	/	/	/	/
18	023	VIVETHITHA . P	/	/	/	/	/	/	/	/	/	/	/	/	/	/
19	301	AROKIYA RAJ	/	/	/	/	/	/	/	/	/	/	/	/	/	/
20	302	KAVINILAVAN J	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	No. of Absentees															
	Initial															

Sl No.	Date															
Date	7	12	12	12	14	14	14	19	19	19	21	22	23	24	25	26
Month	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Period	6	4	5	6	4	5	6	4	5	6	6	2	4	5	6	3
1.	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
2.	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
3.	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
4.	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
5.	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
6.	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
7	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
8	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
9.	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
10.	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
11	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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14	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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16	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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18	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
19	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
20	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

18/9/2020

Sl No.	ASSIGNMENT 1	2	3	4	5	CIA I	II	III
	50	50	50			100	100	100
1.	49	46	40			68	95	97
2.	49	41	47			84	92	90
3.	42	45	42			100	83	86
4.	44	44	43			84	90	97
5.	50	42	48			68	86	95
6.	50	48	47			73	80	96
7	46	50	42			97	95	96
8	42	48	48			82	90	85
9.	44	45	44			84	86	93
10.	50	42	49			64	92	84
11	47	48	41			79	98	94
12	47	40	44			100	93	85
13	44	43	50			81	92	91
14	42	48	45			80	92	50
15	48	44	47			81	98	97
16	47	49	44			94	98	97
17	41	49	41			91	91	97
18	46	46	40			94	98	94
19	41	42	45			100	93	96
20	49	47	42			99	86	85

ATTENDANCE

Sl No.	Reg. No.	Name	28	29	30	1	2	5	6	7	8	9	10	12	13	14	15	16	17	19	20	21	22
			9	9	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
			6	4	4	5	6	6	2	4	5	6	2	6	2	4	5	6	2	6	2	4	5
1.	42211810 9001	AARTHI RO	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
2.	004	ANBUMANI	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
3.	005	BHUVANESI	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
4.	006	BOOBATHI	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
5.	007	EASWARI	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
6.	008	KALAIPRIYA	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
7	009	KANNAN	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
8	013	MOHANRAJ	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
9.	014	MURALIKRIS	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
10.	015	NAVEENKU	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
11	016	NIVETHA	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12	017	PIEOREX	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
13	018	RASU	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
14	019	SAMPATHKU	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
15	020	SIVAPRIYA	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
16	021	SRILEKHA	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
17	022	SURENDHA	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
18	023	VIVETHITHA	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
19	301	AROKIYA RA	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
20	302	KAVINILAVA	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
No. of Absentees																							
Initial																							

Sl No.	Assignment 1	Assignment 2	Assignment 3	Assignment 4	Assignment 5	CIA I	CIA II	CIA III
	50	50	50			100	100	100
1.	49	46	40			68	95	97
2.	49	41	47			84	92	90
3.	42	45	42			100	83	86
4.	44	44	43			84	90	97
5.	50	42	48			68	86	95
6.	50	48	47			73	80	96
7	46	50	42			97	95	96
8	42	48	48			82	90	85
9.	44	45	44			84	86	93
10.	50	42	49			64	92	84
11	47	48	41			79	98	94
12	47	40	44			100	93	85
13	44	43	50			81	92	91
14	42	48	45			80	92	50
15	48	44	47			81	98	97
16	47	49	44			94	98	91
17	41	49	41			91	91	97
18	46	46	40			94	98	94
19	41	42	45			100	93	86
20	49	47	42			99	86	95

ATTENDANCE

Sl No.	Reg. No.	Name	Date	17	17	17	24	24	24	31	31	31	5	5	5	7	7
			Month	8	8	8	8	8	8	8	8	8	8	8	8	9	9
			Period	4	5	6	4	5	6	4	5	6	4	5	6	4	5
21	304	VIJAY .V		/	/	/	/	/	/	/	/	/	/	/	/	/	/
22	305	Vijayakumar.P		/	/	/	/	/	/	/	/	/	/	/	/	/	/
		No. of Absentees		-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Initial															

7	12	12	12	14	14	14	19	19	19	21	22	23	24	25	26
9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
6	4	5	6	4	5	6	4	5	6	1	6	2	4	5	6	3
/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SIGNMENT	Assessment					CIA		
10	1	2	3	4	5	I	II	III
	50	50	50			100	100	100
	48	46	48			87	92	93
	42	41	46			98	93	85

Sl No.	Reg. No.	Name
21	304	VIJAY .
22	305	Vijayak
No. of Absentees		
Initial		

ATTENDANCE

28	29	30	1	2	5	6	7	8	9	10	12	13	14	15	16	1	19	20	21	22
9	9	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
6	2	4	5	6	6	2	4	5	6	2	6	2	4	5	6	2	6	2	4	5
/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-

ASSIGNMENT	Assessment					CIA		
10	1	2	3	4	5	I	II	III
	50	50	50			100	100	100
	48	46	48			87	92	93
	42	41	46			98	93	85

RECORD OF

Sl. No.	Class Planned		Topic Name	Book Referred
	Date	Period		
			UNIT-I 8085 PROCESSOR	
1.	17.8.20	4	Introduction of Microprocessor	T_1
2.	17.8.20	5	Architecture of Microprocessor	T_1
3.	17.8.20	6	Pinouts,	T_1
4.	24.8.20	4	Functional Building Blocks of Processor	T_2 T_1
5	24.8.20	5	Memory Organization	T_2
6.	24.8.20	6	I/O ports	T_2
7	31.8.20	4	Data Transfer Concepts	T_1
8	31.8.20	5	Timing Diagram	T_1
9.	31.8.20	6	Interrupts.	T_2
			UNIT-2	
			PROGRAMMING OF 8085 PROCESSOR	
1.	5.9.20	4	Instruction format	T_1
2.	5.9.20	5	Addressing modes	T_2
3.	5.9.20	6	Assembly language format	T_2
4	7.9.20	4	Data Transfer, data manipulation	T_1
	7.9.20	5	& control instructions	T_1

CLASS WORK

Class Conducted		Reason for Deviation	BT	TA	Staff Sign
Date	Period				
17.08.20	4	-	K_1	PPT	
17.08.20	5	-	K_2	PPT	
17.08.20	6	-	K_1	BB	
24.08.20	4	-	K_2	PPT	
24.8.20	5	-	K_3	PPT	
24.08.20	6	-	K_3	BB	
31/8/20	4	-	K_1	PPT	
31/8/20	5	-	K_2	BB	
31/8/20	6	-	K_1	PPT	
5/9/20	4	-	K_4	PPT	
5/9/20	5	-	K_2	PPT	
5/9/20	6	-	K_1	PPT	
7/9/20	4	-	K_3	PPT	
7/9/20	5	-			

RECORD OF

Sl. No.	Class Planned		Topic Name	Book Referred
	Date	Period		
5.	7/9/20	6	programming of loop structure	T_1
6.	12/9/20	4	programming of Indexing lookup	T_2
7.	12/9/20	5	Subrouting Instructions	T_2
8.	12/9/20	6	STACK	T_1
9.	14/9/20	4	programming of 8085	T_2
			Unit-3	
			8051 Microcontroller	
1.	14/9/20	5	Hardware Architecture	T_1
2.	14/9/20	6	Pinouts	T_2
3.	19/9/20	4	Fuctional Building Blocks of Processor	T_1
4.	19/9/20	5	memory organization	T_2
5.	19/9/20	6	I/O ports and data transfer couple	T_1
6.	21/9/20	6	Timing Diagram	T_1
7.	22/9/20	2	Interupts	T_2
8.	23/9/20	4	Data transfer, Manipulation Control, Algorithms, I/P	T_1

CLASS WORK

Class Conducted		Reason for Deviation	RT	TA	Staff Sign
Date	Period				
7.9.20	6	-	K_4	PPT	
12.9.20	4	-	K_2	BB	
			K_3	PPT	
12.9.20	5	-	K_3	PPT	
12.9.20	6	-	K_1	PPT	
14.9.20	4	-	K_4	BB	
14.9.20	5	-	K_4	PPT	
14.9.20	6	-	K_3	BB	
19.9.20	4	-	K_4	PPT	
19.9.20	5	-	K_2	BB	
19.9.20	6	-	K_3	PPT	
21.9.20	6	-	K_1	PPT	
22.9.20	2	-	K_2	PPT	
23.9.20	4	-	K_3	PPT	

RECORD OF

CLASS WORK

Sl. No.	Class Planned		Topic Name	Book Referred	Class Conducted		Reason for Deviation	BT	TA	Staff Sign
	Date	Period			Date	Period				
9.	24-9-20	5	Comparison to programming Concepts with 8085	Tx1	24.9.20	5	—	K1	PPT	
			UNIT-IV							
			PERIPHERAL INTERFACING							
1.	25-9-20	6	Introduction to Peripheral device.	Tx2	25.9.20	6	—	K2	PPT	
2.	26-9-20	3	Architecture, configuration and Interfacing with 8255	Tx1	26.9.20	3	—	K3	PPT	
3.	28.9.20	6	Architecture, configuration and Interfacing with 8259	Tx1	28.9.20	6	—	K2	BB	
4.	29-9-20	2	Architecture of 8254	Tx1	29.9.20	2	—	K3	PPT	
5.	30-9-20	4	Architecture and configuration of 8279	Tx2	30.9.20	4	—	K2	PPT	
6.	1-10-20	5	A/D Converters	Tx1	1.10.20	5	—	K1	PPT	
7	2-10-20	6	D/A Converters	Tx1	2.10.20	6	—	K3	PPT	
8	5-10-20	6	Interfacing with 8051 and 8051	Tx1	5.10.20	6	—	K2	PPT	
9	6-10-20	2	Interfacing with 8051 and 8051	Tx1	6-10-20	2	—	K4	PPT	

RECORD OF

Sl. No.	Class Planned		Topic Name	Book Referred
	Date	Period		
			UNIT-V	
1			8MICRO CONTROLLER PROGRAMS APPLICATIONS	Tx1
1.	7-10-20	4	Keyboard Interfacing with 8051	Tx1
2.	8-10-20	5	Display Interfacing with 8051	Tx1
3.	9-10-20	6	control of servo motor	Tx1
4	10-10-20	2	stepper motor control	Tx2
5	12-10-20	6	Application to automation systems	Tx1
6	13-10-20	2	Assembly language programs	Tx2
7.	14-10-20	4	washing machine control	Tx1
8	15-10-20	5	programming of 8051	Tx2
9.	16-10-20	2	programming of 8051	Tx1

STAFF INCHARGE

CLASS WORK

Class Conducted		Reason for Deviation	BT	TA	Staff Sign
Date	Period				
7-10-20	4	-	K1	PPT	
8-10-20	5	-	K2	PPT	
9-10-20	6	-	K2	PPT	
10-10-20	2	-	K3	BB	
12-10-20	6	-	K1	PPT	
13-10-20	2	-	K1	PPT	
14-10-20	4	-	K3	PPT	
15-10-20	5	-	K2	BB	
16-10-20	2	-	K1	PPT	

HOD 12/11/2020

PRINCIPAL 2/11/2020

Time Table

PERIOD / DAY	1	2	3	4	5	6	7	8
Monday								
Tuesday								
Wednesday								
Thursday								
Friday								

Unit Completion Details

Unit No.	Unit Description	Start Date	Finish Date	No. of Hours
1	8085 PROCESSOR	17.8.2020	31.08.2020	09
2	PROGRAMMING OF 8085 PROCESSOR	5-9-2020	14.09.2020	09
3	8051 MICRO CONTROLLER	14.9.2020	24.09.2020	09
4	PERIPHERAL INTERFACING	25-9-2020	6.10.2020	09
5	MICROCONTROLLER PROGRAMMING APPLICATION	7.10.2020	20.10.2020	09

Subject In-Charge

HOD 12/11/2020

Principal 16.11.20

ST. ANNE'S COLLEGE OF ENGINEERING AND TECHNOLOGY
(Approved by AICTE, New Delhi. Affiliated to Anna University, Chennai)
ANGUCHETTYPALAYAM, PANRUTI – 607 106.

Course Outcome:

CO No	Course Outcome	Knowledge Level
CO1	Ability to acquire knowledge in Addressing modes & instruction set of 8085 & 8051.	K2
CO2	Ability to understand the importance of Interfacing	K3
CO3	Ability to explain the architecture of Microprocessor and Microcontroller.	K2
CO4	Ability to write the assembly language programme.	K3
CO5	Ability to develop the Microprocessor and Microcontroller based applications	K4

BLOOM'S TAXONOMY: K-Level [K1-Remember, K2-Understand, K3-Apply, K4- Analyze, K5-Evaluate, K6-Create]

CO – PO Mapping

Program Outcome	Course Outcome				
	CO 1	CO 2	CO 3	CO 4	CO 5
PO 1	2	2	2	2	2
PO 2	1	1	1	1	1
PO 3	2	2	2	2	2
PO 4	3	3	3	3	3
PO 5	-	-	-	-	-
PO 6	-	-	-	-	-
PO 7	-	-	-	-	-
PO 8	-	-	-	-	-
PO 9	-	-	-	-	-
PO 10	-	-	-	-	-
PO 11	-	-	-	-	-
PO 12	-	-	-	-	-
PSO1	3	3	3	3	3
PSO2	1	1	1	1	1
PSO3	3	3	3	3	3

Regulation 2017: 1 - Reasonable, 2 – Significant, 3 - Strong

Teaching Aids

BB- Black Board	OHP- Over Head Projector	PPT - Power Point	L1 - Lecture 1
T1 - Tutorial 1	A1- Assignment 1	Tx1 - Text Book 1	Rx1 - Reference Book 1
M - Model and Demo	V- Video Lecture	A- Animation	