KAMARAJ
COLLEGE OF ENGINEERING & TECHNOLOGY
(An Autonomous Institution - AFFILIATED TO ANNA UNIVERSITY, CHENNAI)
S.P.G.Chidambara Nadar - C.Nagammal Campus
S.P.G.C. Nagar, K.Vellakulam – 625 701 (Near VIRUDHUNAGAR).

Department of Mechatronics Engineering

Value Added Course

on

Advanced Industrial Automation

07.08.2023 to 12.08.2023 (6 days)

VAC Coordinator

HoD/MTRE

KAMARAJ
COLLEGE OF ENGINEERING & TECHNOLOGY

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Department of Mechatronics Engineering

S.No.	Content checklist	Document
1	Academic Year	2023-24 ODD Semester
2	Regulation	KCET R2021
3	Department Name	Mechatronics Engineering
4	Name of the Value-added course	Advanced Industrial Automation
5	No. of Credits	2
6	Category: Theory/Lab/Hands-on/Skill based etc	Hands-on &Skill based
7	Name and Details of the Joint-organization (industry/NGO etc) if any	Indwell Automation,Mangaluru.
8	Resource person details	Er.Himanshukumar, Director, Indwell Automation,Mangaluru.
9	Three Member Committee details	Dr.K.Kannan HoD/MTRE S.Wesley Moses Samdoss & A.Arulkumar AP/MTRE
10	VAC Coordinator Details	A.Arulkumar, AP/MTRE
11	Duration (30 h mandatory)	42 hours
12	Period (From-To)	07.08.2023 to 12.08.2023
13	Venue	Industrial Automation Lab/Mechatronics

VAC Coordinator

HoD/MTRE

Dean (Academic Courses)

KAMARAJ
COLLEGE OF ENGINEERING & TECHNOLOGY

S.R.G.Chidambara Nadar - C. Nagammal Campus,
S.P.G.C. Nagar, K. Vellakulam - 625 701, Near VIRUDHUNAGAR, Madurai District.

Accredited by NAAC with 'A' Grade

Submitted to the SECRETARY for approval through the PRINCIPAL

Book No. MTRE

SL No. 96

Date 02/06/2023

1) Name of the object / item / service : Requesting Permission to Conduct

2) Purpose (Replacement / upgradation / New) or (Participation / Presentation) or (Service / Renewal / New) : Value Added Course on "Advanced Industrial Automation for our III MTRE Students. 17th July to 22nd July.

3) Specifications : Rs. 1,500 Per Participant.

4) Approx. Value per object / item (Min. Quote / Reasons for Higher Quote) : 30 Participant × 1500 = 45,000 Rs.

5) No. of Quotations Received : Traveling allowance for Resource Person = 5,000 Rs.

6) No. / Type of objects / items / service needed : Total = 50,000 Rs.

7) Total Value (incl. tax) : Food and accomodation for one trainer from Indwell Automation, Mangalore.

02/06/2023
Signature of Faculty
A.ARULKUMAR

02/06/2023
HOD

2/6/23
PRINCIPAL

OFFICE USE

1) Budget allotted : Value Added Course Exp.

2) Amount committed / Spent sofar :

3) Balance available :

OM

TREASURER

Secretary

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Value Added Course on "Advanced Industrial Automation" Mark Statement

Department : Mechatronics Engineering

Regulation : KCET R2021

Year : III

Semester : V

S.No.	Roll No.	Reg. No.	Student Name	Internal Marks (40)	External Marks (60)	Total (100)
1	21UMT001	920421115006	JEGADHISH PANDIARAJ T.S	36	60	96
2	21UMT002	920421115001	ARAVINDH AARYA.G	38	49	87
3	21UMT003	920421115018	SRI RAMACHANDRAN K	35	39	74
4	21UMT004	920421115012	PARVATHARAJAN.B	38	56	94
5	21UMT006	920421115004	GIRI.P	37	56	93
6	21UMT007	920421115016	SELVAMANI.T	35	53	88
7	21UMT009	920421115003	BHARATHI.R	37	26	63
8	21UMT012	920421115020	SURYAVIGNESH.R	35	42	77
9	21UMT013	920421115015	SAROJ KANNA	37	58	95
10	21UMT014	920421115009	MOHAMMED AMMAR.S	34	47	81
11	21UMT015	920421115005	HARIHARAN.B	34	60	94
12	21UMT016	920421115019	SUBASH CHANDRU.P	35	59	94
13	21UMT017	920421115002	ARAVINTHA KUMAR.S	36	42	78
14	21UMT018	920421115017	SIVANESAKARTHIC.RA.K	34	52	86
15	21UMT019	920421115014	SANGEETHALAKSHMI.M	35	60	95
16	21UMT020	920421115008	LAKSHMAN HARI.C	34	46	80
17	21UMT021	920421115010	MUTHU PANDI.V	37	59	96
18	21UMT023	920421115013	POISOLLAN G.A	35	60	95
19	21UMT024	920421115007	KARUNA SAGAR.T	34	32	66
20	21UMT025	920421115301	ARAVIND.V	35	56	91
21	21UMT026	920421115302	ARIVISHNU.R	34	46	80
22	21UMT027	920421115306	ESAKKI BALA KARTHIK.K	34	55	89
23	21UMT028	920421115309	MITHUN KUMAR G.S	37	60	97
24	21UMT029	920421115303	ARSHAD PARWESH	36	47	83
25	21UMT030	920421115308	KISHOURE KUMAR.D	38	60	98
26	21UMT031	920421115310	SATHISH KUMAR.K	36	56	92
27	21UMT032	920421115307	GOKILAN.K.G	32	51	83
28	21UMT033	920421115304	ARUN PRATOP.K	33	50	83
29	21UMT034	920421115305	DINESH.K	38	33	71

VAC Coordinator

HoD/MTRE

Dean (Academic Courses)

26/8/23

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DEPARTMENT OF MECHATRONICS ENGINEERING

12.08.2023

Value Added Course on "Advanced Industrial Automation"

Project Demonstration marks

S. No.	Roll Number	Name	Project Demonstration				Total (40)
			Presentation (10)	Knowledge Acquired (10)	Creativity (10)	Viva & Result (10)	
1	21UMT001	JEGADHISH PANDIARAJ T.S	10	9	9	8	36
2	21UMT002	ARAVINDH AARYA.G	10	10	9	9	38
3	21UMT003	SRI RAMACHANDRAN K	9	9	9	8	35
4	21UMT004	PARVATHARAJAN.B	10	10	9	9	38
5	21UMT006	GIRI.P	10	9	9	9	37
6	21UMT007	SELVAMANI.T	9	9	9	8	35
7	21UMT009	BHARATHI.R	10	9	9	9	37
8	21UMT012	SURYAVIGNESH.R	9	9	9	8	35
9	21UMT013	SAROJ KANNA	10	9	9	9	37
10	21UMT014	MOHAMMED AMMAR.S	9	9	9	7	34
11	21UMT015	HARIHARAN.B	9	8	9	8	34
12	21UMT016	SUBASH CHANDRU.P	9	9	9	8	35
13	21UMT017	ARAVINTHA KUMAR.S	9	9	9	9	36
14	21UMT018	SIVANESAKARTHIC.RA.K	9	8	9	8	34
15	21UMT019	SANGEETHALAKSHMI.M	10	9	8	8	35

16	21UMT020	LAKSHMAN HARI.C	9	9	8	8	34
17	21UMT021	MUTHU PANDI.V	10	9	9	9	37
18	21UMT022	NILESH.A	AB	AB	AB	AB	AB.
19	21UMT023	POISOLLAN G.A	9	9	9	8	35
20	21UMT024	KARUNA SAGAR.T	9	9	9	7	34
21	21UMT025	ARAVIND.V	10	9	9	7	35
22	21UMT026	ARIVISHNU.R	10	9	8	7	34
23	21UMT027	ESAKKI BALA KARTHIK.K	9	9	8	8	34.
24	21UMT028	MITHUN KUMAR G.S	10	9	9	9	37
25	21UMT029	ARSHAD PARWESH	9	9	9	9	36
26	21UMT030	KISHOURE KUMAR.D	10	10	9	9	38
27	21UMT031	SATHISH KUMAR.K	9	9	9	9	36
28	21UMT032	GOKILAN.K.G	9	8	8	7	32
29	21UMT033	ARUN PRATOP.K	9	8	8	8	33
30	21UMT034	DINESH.K	10	10	9	9	38

Trainer
Er.Himanshukumar,
Director, Indwell Automation

VAC Coordinator
A.Arulkumar,
AP/MTRE

HoD/MTRE
Dr.K.Kannan
Prof&Head/MTRE

INDWELL AUTOMATION

INDWELL
ISO 9001:2015 CERTIFIED

Value Added Course on "Advanced Industrial Automation"

Project Demonstration marks

S. No.	Roll Number	Name	Project Demonstration				Total (40)
			Presentation (10)	Knowledge Acquired (10)	Creativity (10)	Viva & Result (10)	
1	21UMT001	JEGADHISH PANDIARAJ T.S	10	9	9	8	36
2	21UMT002	ARAVINDH AARYA.G	10	10	9	9	38
3	21UMT003	SRI RAMACHANDRAN K	9	9	9	8	35
4	21UMT004	PARVATHARAJAN.B	10	10	9	9	38
5	21UMT006	GIRI.P	10	9	9	9	37
6	21UMT007	SELVAMANI.T	9	9	9	8	35
7	21UMT009	BHARATHI.R	10	9	9	9	37
8	21UMT012	SURYAVIGNESH.R	9	9	9	8	35
9	21UMT013	SAROJ KANNA	10	9	9	9	37
10	21UMT014	MOHAMMED AMMAR.S	9	9	9	7	34
11	21UMT015	HARIHARAN.B	9	8	9	8	34
12	21UMT016	SUBASH CHANDRU.P	9	9	9	8	35
13	21UMT017	ARAVINTHA KUMAR.S	9	9	9	9	36
14	21UMT018	SIVANESAKARTHIC.RA.K	9	8	9	8	34
15	21UMT019	SANGEETHALAKSHMI.M	10	9	8	8	35
16	21UMT020	LAKSHMAN HARI.C	9	9	8	8	34
17	21UMT021	MUTHU PANDI.V	10	9	9	9	37

18	21UMT023	POISOLLAN G.A	9	9	9	8	35
19	21UMT024	KARUNA SAGAR.T	9	9	9	7	34
20	21UMT025	ARAVIND.V	10	9	9	7	35
21	21UMT026	ARIVISHNU.R	10	9	8	7	34
22	21UMT027	ESAKKI BALA KARTHIK.K	9	9	8	8	34
23	21UMT028	MITHUN KUMAR G.S	10	9	9	9	37
24	21UMT029	ARSHAD PARWESH	9	9	9	9	36
25	21UMT030	KISHOURE KUMAR.D	10	10	9	9	38
26	21UMT031	SATHISH KUMAR.K	9	9	9	9	36
27	21UMT032	GOKILAN.K.G	9	8	8	7	32
28	21UMT033	ARUN PRATOP.K	9	8	8	8	33
29	21UMT034	DINESH.K	10	10	9	9	38

Director
Indwell Automation

ID	Start time	Completion time	Email	Name	Total point
1	8-14-23 11:44:21	8-14-23 11:56:21	21umt017@kamarajeng	ARAVINTHA KUMAR.S	42
2	8-14-23 11:30:11	8-14-23 11:56:27	21umt012@kamarajeng	SURYAVIGNESH.R	42
3	8-14-23 11:28:49	8-14-23 12:01:21	21umt003@kamarajeng	SRI RAMACHANDRAN K	39
4	8-14-23 11:28:59	8-14-23 12:05:04	21umt031@kamarajeng	SATHISH KUMAR.K	56
5	8-14-23 11:29:10	8-14-23 12:05:21	21umt013@kamarajeng	SAROJ KANNA	58
6	8-14-23 11:28:54	8-14-23 12:05:26	21umt016@kamarajeng	SUBASH CHANDRU.P	59
7	8-14-23 11:28:49	8-14-23 12:08:39	21umt002@kamarajeng	ARAVINDH AARYA.G	49
8	8-14-23 11:28:50	8-14-23 12:08:40	21umt026@kamarajeng	ARIVISHNU.R	46
9	8-14-23 11:28:54	8-14-23 12:08:44	21umt014@kamarajeng	MOHAMMED AMMAR.S	47
10	8-14-23 11:28:54	8-14-23 12:09:39	21umt007@kamarajeng	SELVAMANI.T	53
11	8-14-23 11:28:55	8-14-23 12:10:53	21umt033@kamarajeng	ARUN PRATOP.K	50
12	8-14-23 11:28:47	8-14-23 12:10:56	21umt021@kamarajeng	MUTHU PANDI.V	59
13	8-14-23 11:28:55	8-14-23 12:14:10	21umt025@kamarajeng	ARAVINTH.V	56
14	8-14-23 11:29:31	8-14-23 12:15:35	21umt006@kamarajeng	GIRI.P	56
15	8-14-23 11:39:12	8-14-23 12:15:50	21umt032@kamarajeng	GOKILAN.K.G	51
16	8-14-23 11:39:15	8-14-23 12:16:04	21umt024@kamarajeng	KARUNA SAGAR.T	32
17	8-14-23 11:42:37	8-14-23 12:16:15	21umt029@kamarajeng	ARSHAD PARWESH	47
18	8-14-23 11:30:29	8-14-23 12:16:46	21umt027@kamarajeng	ESAKKI BALA KARTHIK.K	55
19	8-14-23 11:28:49	8-14-23 12:17:11	21umt028@kamarajeng	MITHUN KUMAR.G.S	60
20	8-14-23 11:29:05	8-14-23 12:17:28	21umt019@kamarajeng	SANGEETHALAKSHMI.M	60
21	8-14-23 11:28:45	8-14-23 12:18:13	21umt018@kamarajeng	SIVANESAKARTHIC.RA.K	52
22	8-14-23 11:29:11	8-14-23 12:18:20	21umt020@kamarajeng	LAKSHMAN HARI.C	46
23	8-14-23 11:28:58	8-14-23 12:21:57	21umt023@kamarajeng	POISOLLAN G.A	60
24	8-14-23 11:28:47	8-14-23 12:22:27	21umt015@kamarajeng	HARIHARAN.B	60
25	8-14-23 11:29:09	8-14-23 12:22:51	21umt030@kamarajeng	KISHOURE KUMAR.D	60
26	8-14-23 11:29:00	8-14-23 12:22:52	21umt001@kamarajeng	JEGADHISH PANDIARAJ T.S	60
27	8-14-23 11:28:57	8-14-23 12:23:02	21umt004@kamarajeng	PARVATHARAJAN.B	56
28	8-14-23 11:39:47	8-14-23 12:25:53	21umt034@kamarajeng	DINESH.K	33
29	8-14-23 13:21:58	8-14-23 13:49:03	21umt009@kamarajeng	BHARATHI.R	26

VAC - Co ordinator.

HOD/MTRE

INDWELL
ISO 9001:2015 CERTIFIED

Value Added Course on "Advanced Industrial Automation" Consolidated Mark Statement

Institute : Kamaraj College of Engineering and Technology — Dpartement : Mechatronics Engg

Year & Sem : III & V — Duration: 07-08-2023 to 12-08-2023

S.No.	Roll No.	Reg. No.	Student Name	Internal Marks (40)	External Marks (60)	Total (100)
1	21UMT001	920421115006	JEGADHISH PANDIARAJ T.S	36	60	96
2	21UMT002	920421115001	ARAVINDH AARYA.G	38	49	87
3	21UMT003	920421115018	SRI RAMACHANDRAN K	35	39	74
4	21UMT004	920421115012	PARVATHARAJAN.B	38	56	94
5	21UMT006	920421115004	GIRI.P	37	56	93
6	21UMT007	920421115016	SELVAMANI.T	35	53	88
7	21UMT009	920421115003	BHARATHI.R	37	26	63
8	21UMT012	920421115020	SURYAVIGNESH.R	35	42	77
9	21UMT013	920421115015	SAROJ KANNA	37	58	95
10	21UMT014	920421115009	MOHAMMED AMMAR.S	34	47	81
11	21UMT015	920421115005	HARIHARAN.B	34	60	94
12	21UMT016	920421115019	SUBASH CHANDRU.P	35	59	94
13	21UMT017	920421115002	ARAVINTHA KUMAR.S	36	42	78
14	21UMT018	920421115017	SIVANESAKARTHIC.RA.K	34	52	86
15	21UMT019	920421115014	SANGEETHALAKSHMI.M	35	60	95
16	21UMT020	920421115008	LAKSHMAN HARI.C	34	46	80
17	21UMT021	920421115010	MUTHU PANDI.V	37	59	96
18	21UMT023	920421115013	POISOLLAN G.A	35	60	95
19	21UMT024	920421115007	KARUNA SAGAR.T	34	32	66
20	21UMT025	920421115301	ARAVIND.V	35	56	91
21	21UMT026	920421115302	ARIVISHNU.R	34	46	80
22	21UMT027	920421115306	ESAKKI BALA KARTHIK.K	34	55	89
23	21UMT028	920421115309	MITHUN KUMAR G.S	37	60	97
24	21UMT029	920421115303	ARSHAD PARWESH	36	47	83
25	21UMT030	920421115308	KISHOURE KUMAR.D	38	60	98
26	21UMT031	920421115310	SATHISH KUMAR.K	36	56	92
27	21UMT032	920421115307	GOKILAN.K.G	32	51	83
28	21UMT033	920421115304	ARUN PRATOP.K	33	50	83
29	21UMT034	920421115305	DINESH.K	38	33	71

INDWELL AUTOMATION MANGALURU

Director
Indwell Automation

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DEPARTMENT OF MECHATRONICS ENGINEERING

(Accredited by NBA, New Delhi)

Value Added Course on Advanced Industrial Automation

S.No	Roll.No	Reg.No	Name	07.08.2023		08.08.2023		09.08.2023	
				FN	AN	FN	AN	FN	AN
1	21UMT001	920421115006	JEGADHISH PANDIARAJ T.S						
2	21UMT002	920421115001	ARAVINDH AARYA.G						
3	21UMT003	920421115018	SRI RAMACHANDRAN K						
4	21UMT004	920421115012	PARVATHARAJAN.B						
5	21UMT006	920421115004	GIRI.P						
6	21UMT007	920421115016	SELVAMANI.T						
7	21UMT009	920421115003	BHARATHI.R						
8	21UMT012	920421115020	SURYAVIGNESH.R						
9	21UMT013	920421115015	SAROJ KANNA						
10	21UMT014	920421115009	MOHAMMED AMMAR.S						
11	21UMT015	920421115005	HARIHARAN.B						
12	21UMT016	920421115019	SUBASH CHANDRU.P						
13	21UMT017	920421115002	ARAVINTHA KUMAR.S						
14	21UMT018	920421115017	SIVANESAKARTHIC.RA.K						
15	21UMT019	920421115014	SANGEETHALAKSHMI.M						
16	21UMT020	920421115008	LAKSHMAN HARI.C						
17	21UMT021	920421115010	MUTHUPANDI.V						

S.No	Roll.No	Reg.No	Name	07.08.2023		08.08.2023		09.08.2023	
				FN	AN	FN	AN	FN	AN
18	21UMT022	920421115011	NILESH.A	AB	AB	AB	AB	AB	AB
19	21UMT023	920421115013	POISOLLAN G.A						
20	21UMT024	920421115007	KARUNA SAGAR.T						
21	21UMT025	920421115301	ARAVINTH.V	V. Aravinth	V. Aravinth	V. Aravinth	V. Aravinth	V. Aravinth	V. Aravinth
22	21UMT026	920421115302	ARIVISHNU.R						
23	21UMT027	920421115306	ESAKKI BALA KARTHIK.K						
24	21UMT028	920421115309	MITHUN KUMAR.G.S	G.S.Mithun	G.S.Mithun	G.S.Mithun	G.S.Mithun	G.S.Mithun	G.S.Mithun
25	21UMT029	920421115303	ARSHAD PARWESH.S	S.Arshad	S.Arshad	S.Arshad	S.Arshad	S.Arshad	S.Arshad
26	21UMT030	920421115308	KISHOURE KUMAR.D						
27	21UMT031	920421115310	SATHISH KUMAR.K						
28	21UMT032	920421115307	GOKILAN.K.G						
29	21UMT033	920421115304	ARUN PRATOP.K						
30	21UMT034	920421115305	DINESH.K	K.Dinesh	K.Dinesh	K.Dinesh	K.Dinesh	K.Dinesh	K.Dinesh

Trainer.

07/08/2023.
VAC In-Charge.

HOD/MTRE

KAMARAJ
COLLEGE OF ENGINEERING & TECHNOLOGY

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DEPARTMENT OF MECHATRONICS ENGINEERING

(Accredited by NBA, New Delhi)

Value Added Course on Advanced Industrial Automation

S.No	Roll.No	Reg.No	Name	10.08.2023		11.08.2023		12.08.2023	
				FN	AN	FN	AN	FN	AN
1	21UMT001	920421115006	JEGADHISH PANDIARAJ T.S						
2	21UMT002	920421115001	ARAVINDH AARYA.G						
3	21UMT003	920421115018	SRI RAMACHANDRAN K						
4	21UMT004	920421115012	PARVATHARAJAN.B						
5	21UMT006	920421115004	GIRI.P						
6	21UMT007	920421115016	SELVAMANI.T						
7	21UMT009	920421115003	BHARATHI.R						
8	21UMT012	920421115020	SURYAVIGNESH.R						
9	21UMT013	920421115015	SAROJ KANNA						
10	21UMT014	920421115009	MOHAMMED AMMAR.S						
11	21UMT015	920421115005	HARIHARAN.B						
12	21UMT016	920421115019	SUBASH CHANDRU.P						
13	21UMT017	920421115002	ARAVINTHA KUMAR.S						
14	21UMT018	920421115017	SIVANESAKARTHIC.RA.K						
15	21UMT019	920421115014	SANGEETHALAKSHMI.M						
16	21UMT020	920421115008	LAKSHMAN HARI.C						
17	21UMT021	920421115010	MUTHUPANDI.V						

S.No	Roll.No	Reg.No	Name	10.08.2023		11.08.2023		12.08.2023	
				FN	AN	FN	AN	FN	AN
18	21UMT022	920421115011	NILESH.A	AB	AB	AB	AB	AB	AB
19	21UMT023	920421115013	POISOLLAN G.A						
20	21UMT024	920421115007	KARUNA SAGAR.T						
21	21UMT025	920421115301	ARAVINTH.V	V.Aravinth	V.Aravinth	V.Aravinth	V.Aravinth	V.Aravinth	V.Aravinth
22	21UMT026	920421115302	ARIVISHNU.R						
23	21UMT027	920421115306	ESAKKI BALA KARTHIK.K						
24	21UMT028	920421115309	MITHUN KUMAR.G.S	G.S.Mithun	G.S.Mithun	G.S.Mithun	G.S.Mithun	G.S.Mithun	G.S.Mithun
25	21UMT029	920421115303	ARSHAD PARWESH.S	S.Arshad	S.Arshad	S.Arshad	S.Arshad	S.Arshad	S.Arshad
26	21UMT030	920421115308	KISHOURE KUMAR.D	D.kishoreKumar	D.kishoreKumar	D.kishoreKumar	D.kishoreKumar	D.kishoreKumar	D.kishoreKumar
27	21UMT031	920421115310	SATHISH KUMAR.K	K.Sathish		K.Sathish	K.Sathish	K.Sathish	K.Sathish
28	21UMT032	920421115307	GOKILAN.K.G	K.G.Gokilan	K.G.Gokilan	K.G.Gokilan	K.G.Gokilan	K.G.Gokilan	K.G.Gokilan
29	21UMT033	920421115304	ARUN PRATOP.K						
30	21UMT034	920421115305	DINESH.K	K.Dinesh	K.Dinesh	K.Dinesh	K.Dinesh	K.Dinesh	K.Dinesh

Trainer.

12/08/2023.

VAC In-Charge:

A.ARULKUMAR, AP/MTRE

HOD/MTRE

KAMARAJ
COLLEGE OF ENGINEERING & TECHNOLOGY

(An Autonomous Institution - AFFILIATED TO ANNA UNIVERSITY, CHENNAI)
S.P.G.Chidambara Nadar - C.Nagammal Campus
S.P.G.C. Nagar, K.Vellakulam – 625 701 (Near VIRUDHUNAGAR).

DEPARTMENT OF MECHATRONICS ENGINEERING

Organizes

Six Days Value Added Course

on

Advanced Industrial Automation

for Pre Final Year Students

Resource Person:

Er. Himanshu Kumar,
Director,
Indwell Automation,
Mangaluru.

Date:
07.08.2023 to 12.08.2023

Time:
9.00 am to 4.00 pm

Venue:
Mechatronics Lab

Convener	Coordinator
Dr. K. Kannan	Mr. A. Arulkumar
Professor & Head	Assistant Professor

KAMARAJ
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DEPARTMENT OF MECHATRONICS ENGINEERING

(Accredited by NBA, New Delhi)

KAMARAJ/MTRE/VAC1/2023-2024 07-08-2023

CIRCULAR

The Department of Mechatronics Engineering is organizing the 6 Days Value Added Course on **"Advanced Industrial Automation".** The details of the programme are as follows:

Date	: 07.08.2023 to 12-08-2023
Time	: 9.10 a.m. to 4.00 p.m.
Venue	: EDUSAT Hall
Name of the Resource Person	**: Er.Himanshukumar, Director, Indwell Automation, Mangaluru.**
Topic	: 6 Days Value Added Course on "Advanced Industrial Automation"
Relevance to PO	: PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO11, PO12
Relevance to PSO	: PSO1, PSO2.
Event Outcome	: This program given the hands on exposure to the students in industrial Control using PLC, HMI, SCADA.

07/08/2023.
VAC Coordinator

07/08/23
HoD/MTRE

Cc to file

1. **IQAC/Dean Academic office/Administrative office**
2. **Department Main Notice Board.**
3. **To be Read in III Year MTRE Class Room.**
4. **To be circulated to III Year MTRE through their office mail.**
5. **Department Circular File.**

Value Added Course on Advanced Industrial Automation – Program Outcome Mapping

	Forenoon	Mapped to Program Outcomes
DAY 1 Forenoon	Introduction to Automation, introduction to controller, micro controller vs PLC, PLC block diagram, Ladder Diagram programming language, basic instructions NO, NC, Coil. Basic programming tricks, basic programs based on truth table, Latch, Flag, examples and programming trick.	PO1,PO2,PO3,PSO1,PSO2
DAY 1 Afternoon	Practice of programs in Codesys software. Ladder simulation, Visualization.	PO1,PO2,PO3,PO5,PSO1,PSO 2
DAY 2 Forenoon	Timer, timer-based examples and programming trick.	PO1,PO2,PO3,PSO1,PSO2
DAY 2 Afternoon	Practice of programs in Codesys software. Ladder simulation, Visualization	PO1,PO2,PO3,PO4,PO5,PSO1, PSO2
DAY 3 Forenoon	Pulse instruction, Pulse based examples, Counter, counter-based examples.	PO1,PO2,PO3,PSO1,PSO2
DAY 3 Afternoon	Practice of programs in Codesys software. Ladder simulation, Visualization.	PO1,PO2,PO3,PO4,PO5,PSO1, PSO2
DAY 4 Forenoon	Introduction to digital inputs/ outputs, wiring concept, SINK/ SOURCE, real time wiring of PLC. Introduction to PLC hardware and software, MITSUBISHI PLC, GX Developer software.	PO1,PO2,PO3,PO5,PO9,PSO1, PSO2
DAY 4 Afternoon	Practice of programs in Codesys software. Ladder simulation, Visualization. Programming in GX Developer, communication, program upload/ download, troubleshooting, program modification, Online edit. Project development.	PO1,PO2,PO3,PO4,PO5,PO9, PO10,PO11,PSO1,PSO2
DAY 5 Forenoon	Introduction to HMI, interface with PLC, screen development, digital & analog data configuration, analog data scaling, password level, screen display & Industrial project development.	PO1,PO2,PO3,PO4,PO5,PO9,P O10,PO11,PSO1,PSO2
DAY 5 Afternoon	Introduction to SCADA, interfacing with PLC, screen development, digital & analog data configuration, analog data scaling, driver selection and configuration, tag creation and configuration & Industrial project development.	PO1,PO2,PO3,PO4,PO5,PO9,P O10,PO11,PSO1,PSO2
DAY 6 Forenoon	Introduction to AC Drive, hardware, parameter setting, speed, direction, acceleration and deceleration time control of induction motor, interfacing with PLC, multispeed & multidirectional control project. Introduction to Analog system, hardware, block diagram of ADC and DAC application, standard signal, channel selection, AD- DA start, scaling, TO FROM instruction, real time application. Monitored and controlled on SCADA.	PO1,PO2,PO3,PO4,PO5,PO9,P O10,PO11,PSO1,PSO2
DAY 6 Afternoon	Assessment test & Mini Project Demonstration, Feedback and conclusion.	PO1,PO2,PO3,PO4,PO5,PO8,P O9,PO10,PO11,PO12,PSO1,PS O2

Trainer.

07/08/2023
VAC - Coordinator

HOD/ MTRE

Himanshu Kumar (Director)

Education:

Electronics and Communication Engineer

MBA in project management (Distance)

Experience:

16 years of experience in Industrial Automation training and project in different industries and universities

Regular industrial project development and troubleshooting based on PLC, HMI, SCADA, DRIVES and ANALOG in different industries such as:

STPC Iran	TATA Motors Pune	ADVIC India Pune
Kalyani groups Pune	IDEAL explosives Odessa	Nitta Gelatin Kochi
Beker gauges Pune	Balco India Gujrat	TATA TOYO

and many more.

Automation awareness program based on PLC, HMI, SCADA, DRIVES and ANALOG in different Engineering colleges for students and faculty members:

IIT Bhubaneshwar	IIIT Tiruchirappalli	IIIT Kanchipuram
University of Technology Oman		
MIT Manipal	VIT Vellore	PSG Tech Coimbatore
MIT Chennai	Army Institute of Technology Pune	Delhi Technological University Delhi
NIRMA UNIVERSITY Ahmadabad	NPTI Nangal (Power Ministry, Govt. of India	Andhra University Vishakhapatnam
PCCOE Pune	DYP Pune	AISSMS Pune
ZEAL Pune	Trinity Pune	MMIT Pune
BIGCE Solapur	Sanjivini Kopargaon	MIT Pune
Tolani Maritime Pune	GECR Awasari	RIT Sangli
NIT Surat	NIT Jalandhar	NIT Warangal
NIT Suratkal	NIT Jaipur	NIT Patna
LNMIIT Jaipur	SJEC Mangaluru	NITTE Mangaluru
PACE Mangaluru	SDMIT Mangaluru	CEC Mangaluru
SAHYADRI Mangaluru	ALVA'S Mangaluru	YENEPOYA Mangaluru
MITE Mangaluru		
RVCE Bengaluru	NMIT Bengaluru	SDMCET Dharwar
SRI SAIRAM ENGINEERING COLLEGE Chennai	SRI RAMKRISHNA ENGINEERING COLLEGE Coimbatore	SRM Chennai
SMVDU Jammu		
LBRCE Vijaywada	SSIT Khammam	GIT Gudlavaleru

and many more.

INDWELL Automation
Workshop Of Automatic Systems
PLC, HMI, SCADA, DRIVES TRAINING & PROJECTS
(MSME Registered and ISO 9001-2015 certified)

Advanced Industrial Automation Training

Friendly and informative sessions

PLC: introduction, types, leading hardware and software, logic development, important instruction, Industrial real applications, Industrial I/Ps & O/Ps, PLC wiring & Industrial project development.

HMI / MMI: Introduction, interfacing with PLC, screen development, digital & analog data configuration, analog data scaling, password level, screen display & Industrial project development.

SCADA: Introduction, interfacing with PLC, screen development, digital & analog data configuration, analog data scaling, driver selection and configuration, tag creation and configuration & Industrial project development.

AC DRIVE: Introduction, hardware, parameter setting, speed, direction, acceleration and deceleration time control of induction motor, interfacing with PLC, multispeed & multidirectional control project.

ANALOG: Introduction to analog signal, standard signal type, block diagram, ATD and DTA conversion program and wiring, Interface with SCADA.

INTERFACING PROJECT: Complete interface of PLC, HMI, SCADA, AC DRIVE, AC motor, Digital I/Os with a real Industrial application.

Duration: 6 Days.

Fee: Rs. 1500/- (Rupees fifteen hundred) per participant. [minimum 30 participants required]

Dates: 7th of Aug to 12th of Aug 2023.

[Travel food and stay for one trainer will be arranged by college]

SJEC campus, Vamanjoor, Mangaluru, D. K. Karnataka, Bharat 575028
7588330985/ 9021330238, indwellmlr@gmail.com, https://sites.google.com/view/indwellautomationmlr/home

KAMARAJ COLLEGE OF ENGINEERING & TECHNOLOGY

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Department of Mechatronics Engineering

Sixth BoS Meeting Minutes

Date : 18-03-2023

Time : 2.00 P.M – 4.00P.M

Venue : SMC Lab

Mode of Meeting : Physical- offline mode

The following members were present:

S.No	Name of the Expert	Designation	Capacity
1	Dr. S. Supriya	Professor & Head, Department of Mechanical Engineering, Government College of Engineering College, Tirunelveli - 627007.	Anna University Nominee
2	Dr. N. Sivakumaran	Professor, Department of Instrumentation and Control Engineering, National Institute of Technology, Tiruchirappalli - 620015.	Academic Council Nominee
3	Dr. M. Suresh	Associate Professor, Department of Robotics and Automation Engineering, PSG College of Technology, Coimbatore – 641004.	Academic Council Nominee
4	Dr.R.Kesavamoorthy	Director, Meta Heuristic Corporate India Pvt. Ltd., ISRO Layout, Bangalore – 560078.	Industrial Expert

5	Mr. P. Rilwan Fayas	Senior Engineer & Team Lead Automotive Domain. TATA ELXSI, Tiruvanathapuram – 695581	Alumni

Internal faculty Members of BoS			
S.No	Name of the Faculty	Designation	Signature
1.	Dr. K. Kannan, M.E., Ph.D.,	Professor & Head	
2.	Dr. S.Rajesh Babu M.E., Ph.D.,	Assistant Professor	
3.	Mr. A. Arul Kumar, M.E, (Ph.D.,)	Assistant Professor	
4.	Mr. P. Bala Sundar, M.E, (Ph.D.,)	Assistant Professor	
5.	Mr. S. David Blessley, M.E, (Ph.D.,)	Assistant Professor	
6.	Mr. A. Ganesan, M.E.,	Assistant Professor	

006.01.00 :Welcome address by HoD

- Welcome address
- Dr.K.Kannan, Professor & HoD/MTRE gave welcome address to all the members of the Board of Studies.

006.02.00 :Introduction of BoS members and new Academic Council Nominee

- BoS Members introduction
- Dr.K.Kannan, Professor & HoD/MTRE gave introduce the members of Board of Studies.

006.03.00 :Approval of 5thBoSMeeting Minutes &Action taken

Item No.	Suggestions of BoS Members in 5thBoS Meeting	Action Taken
BOS 005.02	BoS Members gave valuable suggestions in R2020 - IV Year curriculum and syllabus.	The Suggestions given by BoS Members were incorporated in the R2020 - IV Year curriculum and syllabus as per their recommendations.
BOS	The members advised the three members	As per the advice of BoS members

005.04	committee to choose the Value added courses as per Current trends and skills requirement for core industries.	the three members committee had chosen the Value Added Course on Robot Operating System (ROS) for II Year Students & Value Added Course on Internet of Things (IoT) for our III Year Students.
BOS 005.05	Dr.T.Asokan clarified about the faculty mentors for NPTEL Courses.	Mr.S.David Blessley, AP/MTRE has assigned us faculty mentor for the NPTEL Course on Engineering Metrology.
BOS 005.06	Modified Curriculum Framework R2021 – BoS Members asked our faculty members to take more concentration in framing the verticals and syllabus to Professional Elective Course Verticals.	The entire mechatronics curriculum is splitted in to different domains and domain incharges and subject wise subject experts were framed and framed the curriculum at most care.
	List of Open Elective papers offered by our department	All the members jointly approved the open elective courses to be offered.

- All the members appreciated our efforts taken towards implementing the suggestions given by the members.
- All the members jointly approved the Minutes of the Fifth Board of Studies meeting.

06.04.00 :ITEMS FOR DISCUSSION AND APPROVAL

- The HoD Dr.K.Kannan presented the curriculum and highlighted the important features of R2021.
- Members clarified about the honours degree and minor degree concepts.
- The HoD Dr.K.Kannan presented the syllabi of R2021 and listed the subjects of V and VI semester courses including the verticals and minor degree courses offered by department of department of Mechatronics Engineering .

006.04.01: Proposed Curriculum and Syllabi for V and VI semester Verticals and Minor

V Semester

Name of the Course	Suggestions from BoS members
Embedded Systems And Programming	➢ Dr. N. Sivakumaran . Academic Council Nominee asked about the prerequisites for this subject in curriculum. Dr.K.Kannan clarified in IV Semester the Digital Electronics and Microprocessor course were included. Mmebers accepted it and appreciated for including industrial standard PIC Controller and RTOS Concepts. ➢ Members jointly approved the syllabus and asked the subject experts to update the recent editions of text book.
Kinematics And Dynamics Of Machinery	➢ Dr. M. Suresh. Academic Council Nominee suggested that 9 hours is not sufficient to cover the Unit-II Kinematics Of Linkage And Cam Mechanisms. He also suggested to include tutorial hour if possible. ➢ Dr. S. Supriya , Anna University Nominee suggested that the first unit Basics of Mechanisms will completed in 6 hours, hence for the Unit-II Kinematics Of Linkage And Cam Mechanisms 12 hours may be allotted. ➢ The suggestions were accepted by all the members of the board and subject expert.
Embedded Systems Laboratory	➢ Dr. N. Sivakumaran . Academic Council Nominee. suggested list of experiments is high for one credit lab course. Also he suggested to update the text and reference books. Since the John B. Peatman, "Design with PIC Microcontrollers" Prentice Hall, 2003 is out of print.

	➢ Dr. S. Supriya , Anna University Nominee suggested to remove one inappropriate theory course in curriculum and asked to provide two credits for lab courses. ➢ Mr. P. Rilwan Fayas, ALUMNI Nominee asked the board chairman to remove 8085 experiments. ➢ He also suggested to focus on PIC or ARM controllers to meet the skills requirement of core industries.
Theory Of Machines Laboratory	➢ Dr.K.Kannan explained this lab course is common to mechanical and mechatronics engineering students. Dr. M. Suresh, Academic Council Nominee suggested that experiment with Cam & Spring mass system is in Generic form. ➢ He suggested to rename in specific like Calculate the jump speed etc..Dr.K.Kannan assured to member will convey this valuable point to mechanical board.

VI Semester

Name of the Course	Suggestions from BoS members
Fluid Power Systems (Theory Cum Lab)	➢ Dr. M. Suresh, Academic Council Nominee explained Hydraulics and Pneumatics Course is an hot core paper for our mechatronics engineering. He enquired the reason for merging these two courses. ➢ The subject expert P.Balasundar explained the reasons for merging that all the members accepted it. ➢ Dr. M. Suresh, Academic Council Nominee suggested to include modern trends like KV map method for pure mechatronics system in syllabus. Subject expert accepted it.

	➢ Dr. N. Sivakumaran , Academic Council Nominee asked the subject expert to rearrange the text book in such a manner Anthony Esposito and then Srinivasan.R as per our syllabus contents.
Industrial Automation (Theory Cum Lab)	➢ Dr. N. Sivakumaran , Academic Council Nominee suggested to include SCADA in syllabus. ➢ Dr. M. Suresh, Academic Council Nominee suggested to reduce the Syllabus in Unit –IV Applications of PLC. Since the 6 hours is not sufficient. ➢ Dr. N. Sivakumaran , Academic Council Nominee suggested to remove the Unit –V Overview of Intelligent Controls and asked to include SCADA and Communication Topologies since it is an hot area in industrial automation. The Subject expert accepted it.
Robotics And Machine Vision System	➢ Dr. N. Sivakumaran , Academic Council Nominee suggested to revise the syllabus as three units for robotics and two units for Machine vision system. ➢ He also suggested to remove Selection Of Robots and Applications from Unit-IV and asked to include machine vision system. The subject expert accepted it.
Computer Aided Design And Manufacturing Laboratory	➢ Dr. M. Suresh, Academic Council Nominee enquired whether the syllabus has the provision for CNC Lathe interface. ➢ Mr.S.David Blessley subject expert explained that the experiments will be performed and also that this has successfully done in the past with CNC Lathe interface infrastructure available in mechanical department. All the members accepted the same.

	➢ He also suggested to rename the experiments as follows. NC code generation for milling using any CAM package & Machining NC code generation for turning using any CAM package & Machining ➢ Subject expert accepted it.
Robotics And Machine Vision System Laboratory	➢ Members enquired about the software packages available in our lab premises. ➢ Dr.K.Kannan explained about the available softwares. Members suggested to use ADAMS Software for Robot Dynamics experiments. ➢ Mr. P. Rilwan Fayas, ALUMNI Nominee enquired about the controllers availability for Machine Vision experiments. Also he suggested to focus on ATMEL controllers to meet the skills requirement of core industries. ➢ Dr.K.Kannan, explained that we are having an training kits offered by RobotoAI Technologies, a start up company in PSG College of Engineering for Machine Vision system .All the members accepted it.

PROFESSIONAL ELECTIVE
VERTICAL 1 : ROBOTICS

Name of the Course	Suggestions from BoS members
Design of Robot Elements	➢ All the members of the board accepted the syllabus and suggested to include Selection of Robots topic in syllabus.
Robot Operating Systems	➢ All the members of the board accepted the syllabus without any modification and also appreciated that the text books and reference books suggested were good.

Autonomous Mobile Robots	➢ All the members of the board accepted the syllabus without any modification.
Collaborative Robotics	➢ All the members of the board accepted the syllabus without any modification.
Medical Robotics	➢ All the members of the board accepted the syllabus without any modification.
Humanoid Robotics	➢ All the members of the board accepted the syllabus without any modification.
Micro Robotics	➢ All the members of the board accepted the syllabus without any modification.

PROFESSIONAL ELECTIVE
VERTICAL 2 : AUTOMATION

Name of the Course	Suggestions from BoS members
Total Integrated Automation	➢ Dr. N. Sivakumaran , Academic Council Nominee suggested to revise the syllabus as below. ➢ He Suggested to include Piping and Instrumentation concepts in this subject by removing Supervisory Control And Data Acquisition (SCADA) and Communication Protocols Of SCADA. ➢ Since SCADA and Communication Protocols are need to be included in professional core course industrial automation.
Digital Twin and Industry 5.0	➢ All the members of the board accepted the syllabus without any modification.
Virtual Instrumentation	➢ All the members of the board accepted the syllabus without any modification.
Industrial Networks Protocol	➢ Mr. P. Rilwan Fayas. ALUMNI Nominee suggested to include Over to Air (OTA) topic in syllabus. Subject expert accepted it and assured

	will include in wireless protocols unit.
Advanced Manufacturing	➢ Dr. M. Suresh, Academic Council Nominee suggested to include the topic maintenance and trouble shooting of CNC Machine. Subject expert accepted it.
Farm Automation	➢ All the members of the board accepted the syllabus without any modification.
Computer Aided Inspection and Testing	➢ All the members of the board accepted the syllabus without any modification.

PROFESSIONAL ELECTIVE
VERTICAL 3: SMART MOBILITY SYSTEMS

Name of the Course	Suggestions from BoS members
Automobile Engineering	➢ All the members of the board accepted the syllabus without any modification.
Electric and Hybrid Vehicles	➢ All the members of the board accepted the syllabus without any modification.
Automotive Mechatronics	➢ Mr. P. Rilwan Fayas, ALUMNI Nominee and suggested to include Multicore ECU topic in syllabus before the AUTOSAR Concepts. Subject expert accepted it.
Avionics	➢ Mr. P. Rilwan Fayas, ALUMNI Nominee suggested to include DO Standards topic in syllabus. Subject expert accepted it.
Drone Technologies	➢ HoD Dr.K.Kannan, informed this is the common course offered to Mechatronics and Mechanical Engineering Students. All the members of the board accepted the syllabus without any modification.
Design of UAV Systems	➢ All the members of the board accepted the syllabus without any modification.
IntelligentTransportation Systems	➢ HoD Dr.K.Kannan, informed this is the common

	course offered to Mechatronics and Civil Engineering Students. All the members of the board accepted the syllabus without any modification.

MINOR DEGREE (Department Level)

VERTICALS: EMBEDDED SYTEMS AND ROBOTICS

- The HoD informed that the department of Mechatronics engineering is offering minor degree in embedded systems and robotics and he also presented its verticals courses, syllabus.
- The members suggested for robotics part mechanics and dynamics and kinematics pre requisite is needed. So members asked to provide this prerequisite if circuit branch students chose this as an minor degree. Board chairman accepted it.

Name of the Course	Suggestions from BoS members
Embedded System Design for Robotics	➢ All the members of the board accepted the syllabus without any modification.
Arduino Programming	➢ All the members of the board accepted the syllabus without any modification.
Raspberrypi Programming	➢ All the members of the board accepted the syllabus without any modification.
Industrial Robotics	➢ All the members of the board accepted the syllabus without any modification.
Service and Field Robotics	➢ All the members of the board accepted the syllabus without any modification.
Robot Programming Using ROS	➢ All the members of the board accepted the syllabus without any modification.

- The HoD presented the Institutional Level minor degree offered to our mechatronics students and he also presented its verticals courses. He explained these minor degree and its verticals and syllabus were presented in the offering department BoS Meeting .

MINOR DEGREE (Institutional Level)

VERTICAL I : Fintech and Block Chain

Name of the Course	Suggestions from BoS members
Financial Management	➢ Nil
Fundamentals of Investment	➢ Nil
Banking, Financial Services and Insurance	➢ Nil
Introduction to Block chain and its Applications	➢ Nil
Fintech Personal Finance and Payments	➢ Nil
Introduction to Fintech	➢ Nil

MINOR DEGREE (Institutional Level)

VERTICAL II : Entrepreneurship

Name of the Course	Suggestions from BoS members
Foundations of Entrepreneurship	➢ Nil
Team Building & Leadership Management for Business	➢ Nil
Creativity & Innovation in Entrepreneurship	➢ Nil
Principles of Marketing Management for Business	➢ Nil
Human Resource Management for Entrepreneurs	➢ Nil
Financing New Business Ventures	➢ Nil

MINOR DEGREE (Institutional Level)

VERTICAL III : Business Data Analytics

Name of the Course	Suggestions from BoS members
Statistics for Management	➢ Nil
Data Mining for Business Intelligence	➢ Nil

Human Resource Analytics	➢ Nil
Marketing and Social Media Web Analytics	➢ Nil
Operation and Supply Chain Analytics	➢ Nil
Financial Analytics	➢ Nil

006.04.02 :Common courses in the verticals across other departments

The HoD informed that the Department of Mechatronics Engineering is offering common courses in the verticals across other departments. The common courses are listed below

Name of the Course	Common to	Suggestions from BoS members
Drone Technologies	MTRE & MECH	➢ All the members of the board accepted the syllabus without any modification.

006.04.03 :List of Open Elective courses offered

Name of the Course	Offered to	Suggestions from BoS members
Foundation of Robotics	CSE, ECE, EEE, IT,AI&DS	➢ All the members of the board accepted the syllabus without any modification.
Introduction to PLC Programming	CSE, ECE, EEE, IT,AI&DS	➢ Dr.S.Supriya,Anna University Nominee asked to revise the Course outcomes statements as per blooms level . Since able to able repeated. Subject expert accepted it.
Low Cost Automation	CSE, ECE, EEE, IT,AI&DS	➢ In unit V the term various vibratory is genric. Need to include specifically like linear and bowl feeder. Subject expert accepted it.
Sensors and Actuators	CSE, ECE, EEE, IT,AI&DS	➢ All the members of the board accepted the syllabus without any modification.

006.04.04 :List of NPTEL Courses (equivalence) offered for the students those who are opting for Honours / Minor degree / alternative to professional elective courses

➢ Dr.K.Kannan, Listed out the NPTEL Course Name corresponding to its equivalent Professional elective course.

NPTEL COURSE	Equivalent Professional elective course
Wheeled Mobile Robots	Autonomous Mobile Robots

006.04.05 :Tentative final year curriculum of R2021

Semester VII

S.NO.	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY							
1	Design of Mechatronics System	PCC	3	3	0	0	3
2	Human values and Professional Ethics	HSMC	2	2	0	0	2
3	Management courses	HSMC	3	3	0	0	3
4	Open Elective – II*	OEC	3	3	0	0	3
5	Open Elective – III*	OEC	3	3	0	0	3
6	Open Elective – IV*	OEC	3	3	0	0	3
PRACTICAL							
7	Mini Project	EEC	3	0	0	3	1
TOTAL			**20**	**17**	**0**	**3**	**18**

- *Course from the curriculum of other UG Programmes.

Semester VIII

S.NO.	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
PRACTICAL							
7	Project Work	EEC	20	0	0	20	10
TOTAL			**20**	**0**	**0**	**20**	**10**

- Dr.K.Kannan explained about that Management elective Course is being offered at the institutional level during semester VII.

006.05.00 :ITEMS FOR RATIFICATION

006.05.01 :Changes or corrections in the existing curriculum of R2020 and R2021

Existing	Corrections required and specify the reasons
Course Code & Name & Regulation	- Nil

Course Code & Name & Regulation	➢ Nil
Credit Adjustment	➢ Due to the introduction of this Tamil Courses in Curriculum in R2021 first semester credits is 23 and second semester credits is 24. Members appreciated for including the tamil courses in curriculum as this courses provide an insight into the rich culture, heritage of the state and engineering techniques that were practices in Tamilnadu. Due to that total credits is changed as 166 to 168.
Course Code & Name & Regulation	➢ Nil

006.05.02 :NPTEL Examination results (students performance) and action taken for the students who did not receive the certificates

- The Head of the Department Dr.K.Kannan presented the Performance of our students in NPTEL Exams all the BoS members appreciated our students performance in NPTEL.
- Members suggested that the students who have failed should be given another chance to repeat the same NPTEL course again.
- Dr.K.Kannan explained the procedure followed by KCET controller of Examanition and the students having their current Semester exam & NPTEL exam on the same date, since the failed students are instructed to complete the course in the next semester and all the BoS members accepted it.

06.05.03 Value Added Courses offered if any

- In BoS 005.04 the BoS members advised the three members committee to choose the Value added courses as per current trends and skills requirement for core industries. As per that the three member committee chosen and offered

VAC on Internet of Things (IoT) for third year and Value Added Course on Robot Operating System (ROS) for II year. The BoS members accepted it without any concern.

- The members discussed about Value Added Course to be offered in future. The members suggested to offer Value added course in the field of Machine Learning/Deep Learning, as this could fetch them job opportunities.

06.05.04 :Curriculum feedback and action taken if any

- Dr.K.Kannan presented the curriculum feedback summary collected from various stakeholders which was accepted by all the BoS members.

006.06.00:Information about the (Points Discussed in the following)

Item No.	Description	Suggestions / Comments from the BoS Members
006.06.01	Anna University New Amendment (Honours / Honours in same discipline / Minor)	➢ The HOD Presented the new amendment given by Anna University to the BOS Members.
006.06.02	Pass Percentage of students	➢ The HOD Presented the Pass percentage year wise and course wise. The members appreciated the IV Year and III Year Results. The members suggested to concentrate in II Year Results especially III Semester Results.
006.06.03	Value Added Courses offered/ Planned for the academic year: 2023 - 2024	➢ The HOD Presented the Value added course offered/ planned for the academic year and the members suggestions were noted in 006.05.03.
006.06.04	NBA eSAR / status and information	➢ The HOD happily shared the NBA Accreditation status of the department for three years from AY 2021-2022 to AY 2023-2024.The members appreciated the efforts taken towards the successful implementation of outcome based education.
006.06.05	Student Internship details (between	➢ The HOD shared the statistical data of

	5th and 6th meeting)	the student internship Inplant training details for R2020 & R2021 and all the BoS Members appreciated it. Industrialist Member Dr.R.Kesavamoorthy enquired about the evaluation process. Dr.K.Kannan briefed the evaluation process of Internship and credit transfer.

006.07.00 :Any other Item

- The HoD presented the Department achievements in placement, extra curricular and cocurricular activities of students. The BoS members appreciated the achievements and encouraged for higher salary package and more participations in future.
- Memebrs discussed about the provision of offering the latest amendments regarding tamil courses , Heritage of Tamils was included in I Sem of R2021and Tamils and Technology was included in II Sem of R2021 as per the request from Anna University via L.No.618/CAC/TC/2023.
- Members suggested to offer tamil courses in the upcoming semesters for the 2022-2023 admitted students.

006.08.00 :Vote of Thanks

- The meeting ended with the Vote of Thanks by A.Arulkumar, Assistant Professor, Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

25/03/2023

BoS Coordinator
A.ARULKUMAR

25/3/2023

BoS Chairman
Dr.K.Kannan
HoD/MTRE.

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S.P.G.Chidambara Nadar - C.Nagammal Campus
S.P.G.C. Nagar, K.Vellakulam – 625 701 (Near VIRUDHUNAGAR).

Department of Mechatronics Engineering

(Accredited by NBA, New Delhi)

Members Present: VIth Board of Studies Meeting: Mechatronics Engineering

Date: 18/03/2023

S.No.	Expert Name	Designation & Address	Capacity	Signature
1.	Dr.K.Kannan	Professor& Head, Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology-625701.	Chairperson of the Board	
2.	Dr.S.Supriya	Professor & Head, Department of Mechanical Engineering, Government College of Engineering, Tirunelveli.	Anna University Nominee	
3.	Dr. N. Sivakumaran	Professor, Department of Instrumentation and Control Engineering, National Institute of Technology, Tiruchirappalli – 620015.	Academic Council Nominee	18/3/23
4.	Dr.M.Suresh	Associate Professor, Department of Robotics and Automation Engineering, PSG College of Technology, Coimbatore – 641004	Academic Council Nominee	18/3/23
5.	Dr.R.Kesavamoorthy,	Director, Meta Heuristic Corporate India Pvt. Ltd.FF-4, #54, 3rd Cross Vittal Nagar, ISRO Layout, Bangalore – 560078.	Industrial Expert	18/03/23
6.	Mr.P.Rilwan Fayas	Senior Engineer and Technical Lead, TATA ELXSI, Thiruvananthapuram.	Alumni	

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S.P.G.C. Nagar, K.Vellakulam – 625 701 (Near VIRUDHUNAGAR).

02.06.2023

Minutes of Meeting

As per the current needs in industry, we need to provide the Value-added course for 2021 – 2025 Batch , III year UG candidates in 2023 – 2024 ODD semester. In connection with this, the three member committee has been constituted to scrutinize the Value-added course evaluation, meeting has been convened on 02.06.2023 (1.30 PM to 02.30 PM) at SMC Centre for Excellence Lab, Mechatronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

The Three-member committee has recommended the Value-added course "Advanced Industrial Automation" for 2021-2025 Batch

Members List

S.No.	Members	Category	Signature
1	Dr.K.Kannan, Prof. & Head/MTRE	Head	
2	Mr.S.Wesley Moses Samdoss, AP/MTRE	UG Coordinator	
3	Mr.A.Arulkumar, AP/MTRE	VAC Incharge	02/06/2023

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S.P.G.C. Nagar, K.Vellakulam – 625 701 (Near VIRUDHUNAGAR).

DEPARTMENT OF MECHATRONICS ENGINEERING

(Accredited by NBA, New Delhi)

Report on "Value Added Course on Advanced Industrial Automation"

18.08.2023

Department of Mechatronics Engineering, Kamaraj College of Engineering & Technology organized 6-day Value added course on "Advanced Industrial Automation " for III year Mechatronics Engineering students from 07.08.2023 to 12.08.2023. Er.Himanshukumar from Indwell Automation, Mangalore, handled the sessions and trained our students during the entire program. The main purpose of this event is to equip our budding Mechatronics engineers with the knowledge of Industrial Automation through hands on sessions and make them industry ready. The program began with a formal welcome address by Dr.K.Kannan HoD/MTRE. The Trainer provided hands on training on PLC, HMI,SCADA, programming using Codesys software and integrate them to create custom industrial applications.

Topics Covered

1. Programmable Logic Controller
2. Human Machine Interface/Machine to Machine Interface
3. Supervisory Control and Data Acquisition system
4. Build AC Drives by PLC
5. Projects with Analog Signals
6. Interfacing Projects with PLC

At the end of the course, students presented their project and an assessment test was conducted to evaluate the performance of the individuals. A total of 30 students attended the program and get benefitted. Finally, the program ends with a feedback session followed by a formal vote of thanks.

18/08/2023

Co-Ordinator

HoD/MTRE

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DEPARTMENT OF MECHATRONICS ENGINEERING

(Accredited by NBA, New Delhi)

Value Added Course on Advanced Industrial Automation

(for III year Mechatronics Engineering Students)

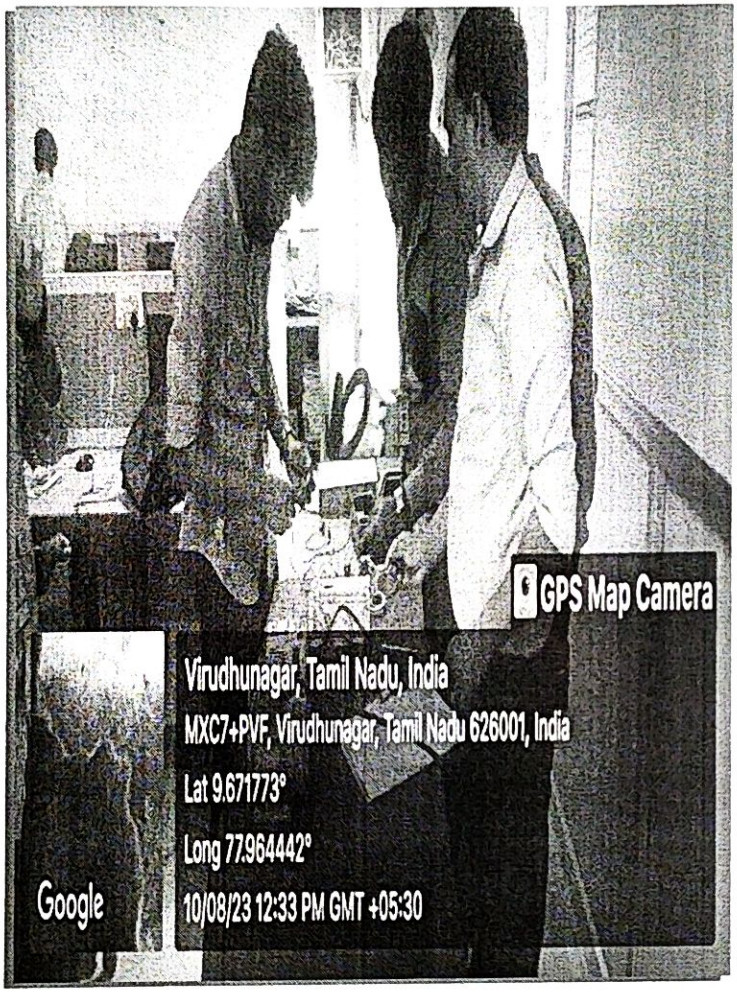
Introduction to Automation : Role of PLC in Automation

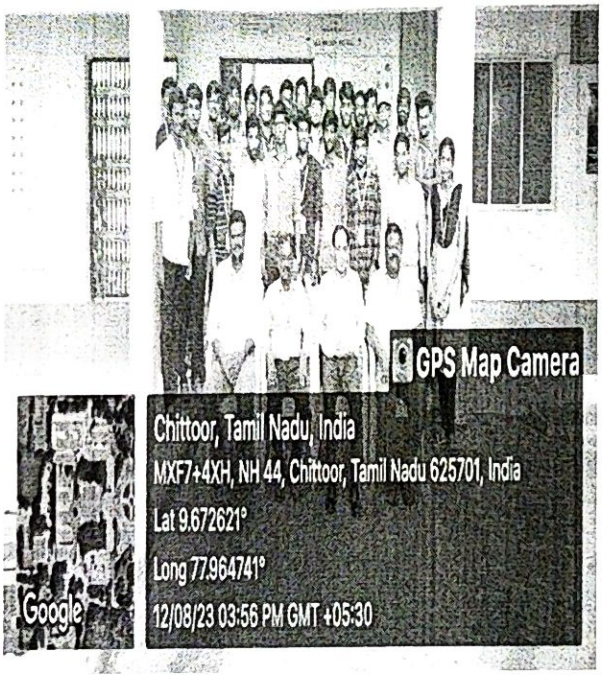
PLC Programming & SCADA

Human Machine Interface (HMI)

Analog Signals & AC Drive

Mini Project Demonstration & Viva Voce





14/08/2023.

VAC Coordinator

HoD/MTRE

INDWELL AUTOMATION

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ISO 9001:2015 CERTIFIED

Certificate

Advanced Industrial Automation Training

We are pleased to place on record that

Mr. / Ms. JEGADHISH PANDIARAJ T.S has successfully completed the Advanced Industrial Automation Training in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology. This Course includes Extension Training on Programmable logic Controller (PLCs), HMI, SCADA, Drive and Analog Signals.

Course Type & Duration: **Value added course / 1 week (07/08/23-12/08/23)**

ASSESSMENT MARKS: 96 %

Sr. No. IND0712082301 Date: 14 AUG 2023

INDWELL AUTOMATION MANGALURU

Director
Indwell Automation

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ISO 9001:2015 CERTIFIED

Certificate

Advanced Industrial Automation Training

We are pleased to place on record that

Mr. / Ms. ARAVINDH AARYA.G **has successfully completed the Advanced Industrial Automation Training in association with the Department of Mechatronics Engineering , Kamaraj College of Engineering and Technology. This Course includes Extension Training on Programmable logic Controller (PLCs), HMI, SCADA, Drive and Analog Signals.**

Course Type & Duration: **Value added course / 1 week (07/08/23-12/08/23)**

ASSESSMENT MARKS: 87 %

Sr. No. IND0712082302

Date: 14 AUG 2023

INDWELL AUTOMATION MANGALURU

Director
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Certificate

Advanced Industrial Automation Training

We are pleased to place on record that

Mr. / Ms. SRI RAMACHANDRAN .K **has successfully completed the Advanced Industrial Automation Training in association with the Department of Mechatronics Engineering , Kamaraj College of Engineering and Technology. This Course includes Extension Training on Programmable logic Controller (PLCs), HMI, SCADA, Drive and Analog Signals.**

Course Type & Duration: **Value added course / 1 week (07/08/23-12/08/23)**

ASSESSMENT MARKS: 74 %

Sr. No. IND0712082303

Date: 14 AUG 2023

INDWELL AUTOMATION MANGALURU

Director
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Certificate

Advanced Industrial Automation Training

We are pleased to place on record that

Mr. / Ms. PARVATHARAJAN.B **has successfully completed the Advanced Industrial Automation Training in association with the Department of Mechatronics Engineering , Kamaraj College of Engineering and Technology. This Course includes Extension Training on Programmable logic Controller (PLCs), HMI, SCADA, Drive and Analog Signals.**

Course Type & Duration: **Value added course / 1 week (07/08/23-12/08/23)**

ASSESSMENT MARKS: 94 %

Sr. No. IND0712082304

Date: 14 AUG 2023

INDWELL AUTOMATION MANGALURU

Director
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Certificate

Advanced Industrial Automation Training

We are pleased to place on record that

Mr. / Ms. GIRI.P **has successfully completed the Advanced Industrial Automation Training in association with the Department of Mechatronics Engineering , Kamaraj College of Engineering and Technology. This Course includes Extension Training on Programmable logic Controller (PLCs), HMI, SCADA, Drive and Analog Signals.**

Course Type & Duration: **Value added course / 1 week (07/08/23-12/08/23)**

ASSESSMENT MARKS: 93 %

Sr. No. IND0712082305 Date: 14 AUG 2023

INDWELL AUTOMATION MANGALURU

Director
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Certificate

Advanced Industrial Automation Training

We are pleased to place on record that

Mr. / Ms. SELVAMANI.T **has successfully completed the Advanced Industrial Automation Training in association with the Department of Mechatronics Engineering , Kamaraj College of Engineering and Technology. This Course includes Extension Training on Programmable logic Controller (PLCs), HMI, SCADA, Drive and Analog Signals.**

Course Type & Duration: **Value added course / 1 week (07/08/23-12/08/23)**

ASSESSMENT MARKS: 88 %

Sr. No. IND0712082306 Date: 14 AUG 2023

INDWELL AUTOMATION MANGALURU

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Certificate

Advanced Industrial Automation Training

We are pleased to place on record that

Mr. / Ms. BHARATHI.R **has successfully completed the Advanced Industrial Automation Training in association with the Department of Mechatronics Engineering , Kamaraj College of Engineering and Technology. This Course includes Extension Training on Programmable logic Controller (PLCs), HMI, SCADA, Drive and Analog Signals.**

Course Type & Duration: **Value added course / 1 week (07/08/23-12/08/23)**

ASSESSMENT MARKS: 63 %

Sr. No. IND0712082307 Date: 14 AUG 2023

INDWELL AUTOMATION MANGALURU

Director
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Certificate

Advanced Industrial Automation Training

We are pleased to place on record that

Mr. / Ms. SURYAVIGNESH.R **has successfully completed the Advanced Industrial Automation Training in association with the Department of Mechatronics Engineering , Kamaraj College of Engineering and Technology. This Course includes Extension Training on Programmable logic Controller (PLCs), HMI, SCADA, Drive and Analog Signals.**

Course Type & Duration: **Value added course / 1 week (07/08/23-12/08/23)**

ASSESSMENT MARKS: 77 %

Sr. No. IND0712082308

Date: 14 AUG 2023

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Director
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Certificate

Advanced Industrial Automation Training

We are pleased to place on record that

Mr. / Ms. SAROJ KANNA **has successfully completed the Advanced Industrial Automation Training in association with the Department of Mechatronics Engineering , Kamaraj College of Engineering and Technology. This Course includes Extension Training on Programmable logic Controller (PLCs), HMI, SCADA, Drive and Analog Signals.**

Course Type & Duration: **Value added course / 1 week (07/08/23-12/08/23)**

ASSESSMENT MARKS: 95 %

Sr. No. IND0712082309 Date: 14 AUG 2023

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Director
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Certificate

Advanced Industrial Automation Training

We are pleased to place on record that

Mr. / Ms. MOHAMMED AMMAR.S **has successfully completed the Advanced Industrial Automation Training in association with the Department of Mechatronics Engineering , Kamaraj College of Engineering and Technology. This Course includes Extension Training on Programmable logic Controller (PLCs), HMI, SCADA, Drive and Analog Signals.**

Course Type & Duration: **Value added course / 1 week (07/08/23-12/08/23)**

ASSESSMENT MARKS: 81 %

Sr. No. IND0712082310

Date: 14 AUG 2023

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Director
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Certificate

Advanced Industrial Automation Training

We are pleased to place on record that

Mr. / Ms. HARIHARAN.B has successfully completed the Advanced Industrial Automation Training in association with the Department of Mechatronics Engineering , Kamaraj College of Engineering and Technology. This Course includes Extension Training on Programmable logic Controller (PLCs), HMI, SCADA, Drive and Analog Signals.

Course Type & Duration: **Value added course / 1 week (07/08/23-12/08/23)**

ASSESSMENT MARKS: 94 %

Sr. No. IND0712082311 Date: 14 AUG 2023

INDWELL AUTOMATION MANGALURU

Director
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Certificate

Advanced Industrial Automation Training

We are pleased to place on record that

Mr. / Ms. SUBASH CHANDRU.P **has successfully completed the Advanced Industrial Automation Training in association with the Department of Mechatronics Engineering , Kamaraj College of Engineering and Technology. This Course includes Extension Training on Programmable logic Controller (PLCs), HMI, SCADA, Drive and Analog Signals.**

Course Type & Duration: **Value added course / 1 week (07/08/23-12/08/23)**

ASSESSMENT MARKS: 94 %

Sr. No. IND0712082312 Date: 14 AUG 2023

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Director
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Certificate

Advanced Industrial Automation Training

We are pleased to place on record that

Mr. / Ms. ARAVINTHA KUMAR.S **has successfully completed the Advanced Industrial Automation Training in association with the Department of Mechatronics Engineering , Kamaraj College of Engineering and Technology. This Course includes Extension Training on Programmable logic Controller (PLCs), HMI, SCADA, Drive and Analog Signals.**

Course Type & Duration: **Value added course / 1 week (07/08/23-12/08/23)**

ASSESSMENT MARKS: 78 %

Sr. No. IND0712082313

Date: 14 AUG 2023

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Advanced Industrial Automation Training

We are pleased to place on record that

Mr. / Ms. SIVANESAKARTHIC.RA.K **has successfully completed the Advanced Industrial Automation Training in association with the Department of Mechatronics Engineering , Kamaraj College of Engineering and Technology. This Course includes Extension Training on Programmable logic Controller (PLCs), HMI, SCADA, Drive and Analog Signals.**

Course Type & Duration: **Value added course / 1 week (07/08/23-12/08/23)**

ASSESSMENT MARKS: 86 %

Sr. No. IND0712082314

Date: 14 AUG 2023

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Director
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Advanced Industrial Automation Training

We are pleased to place on record that

Mr. / Ms. SANGEETHALAKSHMI.M **has successfully completed the Advanced Industrial Automation Training in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology. This Course includes Extension Training on Programmable logic Controller (PLCs), HMI, SCADA, Drive and Analog Signals.**

Course Type & Duration: **Value added course / 1 week (07/08/23-12/08/23)**

ASSESSMENT MARKS: 95 %

Sr. No. IND0712082315

Date: 14 AUG 2023

INDWELL AUTOMATION MANGALURU

Director
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Advanced Industrial Automation Training

We are pleased to place on record that

Mr. / Ms. LAKSHMAN HARI.C **has successfully completed the Advanced Industrial Automation Training in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology. This Course includes Extension Training on Programmable logic Controller (PLCs), HMI, SCADA, Drive and Analog Signals.**

Course Type & Duration: **Value added course / 1 week (07/08/23-12/08/23)**

ASSESSMENT MARKS: 80 %

Sr. No. IND0712082316

Date: 14 AUG 2023

INDWELL AUTOMATION MANGALURU

Director
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Certificate

Advanced Industrial Automation Training

We are pleased to place on record that

Mr. / Ms. MUTHU PANDI.V **has successfully completed the Advanced Industrial Automation Training in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology. This Course includes Extension Training on Programmable logic Controller (PLCs), HMI, SCADA, Drive and Analog Signals.**

Course Type & Duration: **Value added course / 1 week (07/08/23-12/08/23)**

ASSESSMENT MARKS: 96 %

Sr. No. IND0712082317

Date: 14 AUG 2023

INDWELL AUTOMATION MANGALURU

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Certificate

Advanced Industrial Automation Training

We are pleased to place on record that

Mr. / Ms. POISOLLAN G.A **has successfully completed the Advanced Industrial Automation Training in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology. This Course includes Extension Training on Programmable logic Controller (PLCs), HMI, SCADA, Drive and Analog Signals.**

Course Type & Duration: **Value added course / 1 week (07/08/23-12/08/23)**

ASSESSMENT MARKS: 95 %

Sr. No. IND0712082318

Date: 14 AUG 2023

INDWELL AUTOMATION MANGALURU

Director
Indwell Automation

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Certificate

Advanced Industrial Automation Training

We are pleased to place on record that

Mr. / Ms. KARUNA SAGAR.T has successfully completed the Advanced Industrial Automation Training in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology. This Course includes Extension Training on Programmable logic Controller (PLCs), HMI, SCADA, Drive and Analog Signals.

Course Type & Duration: **Value added course / 1 week (07/08/23-12/08/23)**

ASSESSMENT MARKS: 66 %

Sr. No. IND0712082319 Date: 14 AUG 2023

INDWELL AUTOMATION MANGALURU

Director
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Certificate

Advanced Industrial Automation Training

We are pleased to place on record that

Mr. / Ms. ARAVIND.V **has successfully completed the Advanced Industrial Automation Training in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology. This Course includes Extension Training on Programmable logic Controller (PLCs), HMI, SCADA, Drive and Analog Signals.**

Course Type & Duration: **Value added course / 1 week (07/08/23-12/08/23)**

ASSESSMENT MARKS: 91 %

Sr. No. IND0712082320 Date: 14 AUG 2023

INDWELL AUTOMATION MANGALURU

Director
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Certificate

Advanced Industrial Automation Training

We are pleased to place on record that

Mr. / Ms. ARIVISHNU.R **has successfully completed the Advanced Industrial Automation Training in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology. This Course includes Extension Training on Programmable logic Controller (PLCs), HMI, SCADA, Drive and Analog Signals.**

Course Type & Duration: **Value added course / 1 week (07/08/23-12/08/23)**

ASSESSMENT MARKS: 80 %

Sr. No. IND0712082321

Date: 14 AUG 2023

INDWELL AUTOMATION MANGALURU

Director
Indwell Automation

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Certificate

Advanced Industrial Automation Training

We are pleased to place on record that

Mr. / Ms. ESAKKI BALA KARTHIK.K **has successfully completed the Advanced Industrial Automation Training in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology. This Course includes Extension Training on Programmable logic Controller (PLCs), HMI, SCADA, Drive and Analog Signals.**

Course Type & Duration: **Value added course / 1 week (07/08/23-12/08/23)**

ASSESSMENT MARKS: 89 %

Sr. No. IND0712082322

Date: 14 AUG 2023

INDWELL AUTOMATION MANGALURU

Director
Indwell Automation

INDWELL AUTOMATION

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Certificate

Advanced Industrial Automation Training

We are pleased to place on record that

Mr. / Ms. MITHUN KUMAR G.S **has successfully completed the Advanced Industrial Automation Training in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology. This Course includes Extension Training on Programmable logic Controller (PLCs), HMI, SCADA, Drive and Analog Signals.**

Course Type & Duration: **Value added course / 1 week (07/08/23-12/08/23)**

ASSESSMENT MARKS: 97 %

Sr. No. IND0712082323

Date: 14 AUG 2023

INDWELL AUTOMATION MANGALURU

Director
Indwell Automation

INDWELL AUTOMATION

INDWELL
ISO 9001:2015 CERTIFIED

Certificate

Advanced Industrial Automation Training

We are pleased to place on record that

Mr. / Ms. ARSHAD PARWESH has successfully completed the Advanced Industrial Automation Training in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology. This Course includes Extension Training on Programmable logic Controller (PLCs), HMI, SCADA, Drive and Analog Signals.

Course Type & Duration: **Value added course / 1 week (07/08/23-12/08/23)**

ASSESSMENT MARKS: 83 %

Sr. No. IND0712082324 Date: 14 AUG 2023

INDWELL AUTOMATION MANGALURU

Director
Indwell Automation

INDWELL AUTOMATION

INDWELL
ISO 9001:2015 CERTIFIED

Certificate

Advanced Industrial Automation Training

We are pleased to place on record that

Mr. / Ms. KISHOURE KUMAR.D **has successfully completed the Advanced Industrial Automation Training in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology. This Course includes Extension Training on Programmable logic Controller (PLCs), HMI, SCADA, Drive and Analog Signals.**

Course Type & Duration: **Value added course / 1 week (07/08/23-12/08/23)**

ASSESSMENT MARKS: 98 %

Sr. No. IND0712082325

Date: 14 AUG 2023

INDWELL AUTOMATION MANGALURU

Director
Indwell Automation

INDWELL AUTOMATION

INDWELL
ISO 9001:2015 CERTIFIED

Certificate

Advanced Industrial Automation Training

We are pleased to place on record that

Mr. / Ms. SATHISH KUMAR.K **has successfully completed the Advanced Industrial Automation Training in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology. This Course includes Extension Training on Programmable logic Controller (PLCs), HMI, SCADA, Drive and Analog Signals.**

Course Type & Duration: **Value added course / 1 week (07/08/23-12/08/23)**

ASSESSMENT MARKS: 92 %

Sr. No. IND0712082326 Date: 14 AUG 2023

INDWELL AUTOMATION MANGALURU

Director
Indwell Automation

INDWELL AUTOMATION

INDWELL
ISO 9001:2015 CERTIFIED

Certificate

Advanced Industrial Automation Training

We are pleased to place on record that

Mr. / Ms. GOKILAN.K.G **has successfully completed the Advanced Industrial Automation Training in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology. This Course includes Extension Training on Programmable logic Controller (PLCs), HMI, SCADA, Drive and Analog Signals.**

Course Type & Duration: **Value added course / 1 week (07/08/23-12/08/23)**

ASSESSMENT MARKS: 83 %

Sr. No. IND0712082327 Date: 14 AUG 2023

INDWELL AUTOMATION MANGALURU

Director
Indwell Automation

INDWELL AUTOMATION

INDWELL
ISO 9001:2015 CERTIFIED

Certificate

Advanced Industrial Automation Training

We are pleased to place on record that

Mr. / Ms. ARUN PRATOP.K **has successfully completed the Advanced Industrial Automation Training in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology. This Course includes Extension Training on Programmable logic Controller (PLCs), HMI, SCADA, Drive and Analog Signals.**

Course Type & Duration: **Value added course / 1 week (07/08/23-12/08/23)**

ASSESSMENT MARKS: 83 %

Sr. No. IND0712082328

Date: 14 AUG 2023

INDWELL AUTOMATION MANGALURU

Director
Indwell Automation

INDWELL AUTOMATION

INDWELL
ISO 9001:2015 CERTIFIED

Certificate

Advanced Industrial Automation Training

We are pleased to place on record that

Mr. / Ms. DINESH.K has successfully completed the Advanced Industrial Automation Training in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology. This Course includes Extension Training on Programmable logic Controller (PLCs), HMI, SCADA, Drive and Analog Signals.

Course Type & Duration: **Value added course / 1 week (07/08/23-12/08/23)**

ASSESSMENT MARKS: 71 %

Sr. No. IND0712082329 Date: 14 AUG 2023

INDWELL AUTOMATION MANGALURU

Director
Indwell Automation

KAMARAJ
COLLEGE OF ENGINEERING & TECHNOLOGY

(An Autonomous Institution - AFFILIATED TO ANNA UNIVERSITY, CHENNAI)
S.P.G.Chidambara Nadar - C.Nagammal Campus
S.P.G.C. Nagar, K.Vellakulam – 625 701 (Near VIRUDHUNAGAR).

Value Added Course on Advanced Industrial Automation – External Assessment Test

Year & Dept. : **III / Mechatronics Engineering** **Date: 12-08-2023 Academic Year: 2023-24(ODD)**

Venue: Industrial Automation Laboratory, Department of Mechatronics Engineering

Hall Invigilator: A.ARULKUMAR, AP/MTRE

Schedule

Date of Exam	Session	Duration		Reg. No	No. of Students
		From	To		
14-08-2023	FN	11:20 AM	12:50 PM	920421115001-920421115020 & 920421115301-920421115310	30

12/08/2023.
VAC Co-ordinator

HoD/MTRE

Assessment Test on Value Added Course on "Advanced Industrial Automation"

Date: 14-08-2023, Total Marks: 60

* Required

* This form will record your name, please fill your name.

1

Name of The student *

2

Enter Your Roll Number *

Enter Your Register Number *

Part-A (30 Questions * 1 Mark Each)

Answer all the Questions

4

What is the name of controller in which logic is designed by wires, electrical and electronics devices? * (1 Point)

- ◯ Micro controller
- ◯ PLC
- ◯ Relay logic controller
- ◯ CNC

5

What is the name of controller used to control machines in today's industries? * (1 Point)

- ◯ Micro controller
- ◯ PLC
- ◯ Relay logic controller
- ◯ Arduino

6

Basically, the function of a PLC is to: * (1 Point)

- ◯ amplify various weak signal sources
- ◯ Control a high voltage output with a low voltage input
- ◯ control the speed of motors
- ◯ make logical decisions and provide outputs

7

The basic difference between a PLC and relay control system is that_____ * (1 Point)

- ◯ different type of input devices are used
- ◯ different types of output devices are used
- ◯ different types of output voltage levels are used
- ◯ one uses relay control logic and the other uses programmed instruction

8

Which is not the type of PLC input output terminals? * (1 Point)

- ◯ Triac
- ◯ Contactor
- ◯ Transistor
- ◯ Relay

9

What is the product name of Mitsubishi PLC? * (1 Point)

- ◯ Rockwell
- ◯ Simatic
- ◯ Melsec
- ◯ DELTA

10

What is the name of software used for Mitsubishi PLC? * (1 Point)

- ◯ GX Works
- ◯ GX Developer
- ◯ Mitsubishi manager
- ◯ Simatic manager

11

What is the device name used to provide 24 DC in PLC wiring? * (1 Point)

- ◯ RPS
- ◯ Battery
- ◯ Transformer
- ◯ SMPS

Which device is used to control parameters of an induction motor? * (1 Point)

- ◯ PLC
- ◯ HMI
- ◯ VFD
- ◯ DAC

13

Which device is used to connect analog sensor with PLC? * (1 Point)

- ◯ ADC
- ◯ DAC
- ◯ PLC
- ◯ Arduino

14

The input interface module: * (1 Point)

- ◯ condition the signal received from a field device
- ◯ allow the programmer to input the program
- ◯ allows the CPU to input messages to a CRT screen
- ◯ Provides inputs to motor controllers and similar field devices.

15

The output interface module connects to: * (1 Point)

- ◯ Sensing devices such as switches or push buttons.
- ◯ load device such as lamps or solenoids
- ◯ the programming device that control the machine process.
- ◯ the tape or disc drive circuits

16

Which Module of the PLC connects to field devices such as Push buttons, Sensors, Limit Switches? * (1 Point)

- ◯ Input
- ◯ Power supply
- ◯ output
- ◯ Memory

17

One function of a PLC output interface module is to: * (1 Point)

- ◯ accept signals from the process field devices and convert them into signals that can be used by the processor.
- ◯ convert signals from the processing unit into values that can be used to control the machine or process
- ◯ input signals from the programming device and convert them into signals that can be used by the CPU
- ◯ Interpret and execute the user program that controls the machine or process.

The location of the specific input or output field device is identified by the processor by means of its: * (1 Point)

- ◯ voltage rating
- ◯ current rating
- ◯ Wattage rating
- ◯ Address

19

The discrete output interface module is designed to provide: * (1 Point)

- ◯ output voltages in the 5V DC range
- ◯ varying AC or DC voltages depending on the type of module selected
- ◯ simple on or off switching control
- ◯ binary coded output

20

Which of the following memory types often referred to as read/write memory * (1 Point)

- ◯ RAM
- ◯ PROM
- ◯ EPROM
- ◯ EEPROM

21

The most common form of memory used to store, back up, or transfer PLC program is: * (1 Point)

- ◯ RAM
- ◯ PROM
- ◯ EPROM
- ◯ EEPROM

22

The maximum number of rungs allowed in Ladder Logic Program is: * (1 Point)

- ◯ one
- ◯ Two
- ◯ Three
- ◯ limited only by the memory size

23

PLC can be ____ in plant to change the sequence of operation. * (1 Point)

- ◯ only programmed
- ◯ only reprogrammed
- ◯ programmed and reprogrammed
- ◯ able to give a set point

A limit switch is usually actuated by_---------- * (1 Point)

- ◯ hand
- ◯ pressure
- ◯ contact with an object
- ◯ electromagnet

25

The PLC counter instruction is similar to the: * (1 Point)

- ◯ internal relay instruction
- ◯ transitional contact instruction
- ◯ relay coil and contact instruction
- ◯ timer instruction

The RES instruction: * (1 Point)

- ◯ is used to reset the counter
- ◯ is given the same reference address as the counter instruction.
- ◯ decrements the count when actuated
- ◯ both a and b

27

Normally counters are retentive. This means that if your accumulated count is up to 0300 and power to your system is lost, when power is restored the accumulated count will be: * (1 Point)

- ◯ 0000
- ◯ 0250
- ◯ 0300
- ◯ 0999

28

Which of the following is not associated with a PLC Counter Instruction? * (1 Point)

- ◯ Preset Value
- ◯ Time Base
- ◯ Address
- ◯ Accumulated Value

29

What is the full form of SCADA? * (1 Point)

- ◯ Supervisory Control and Document Acquisition
- ◯ Supervisory Control and Data Acquisition
- ◯ Supervisory Column and Data Assessment
- ◯ Supervisory Column and Data Assessment

30

The advantage of RS-232C is * (1 Point)

- ◯ limited speed of communication
- ◯ high-voltage level signaling
- ◯ big-size communication adapters
- ◯ Small Distance (upto 50 feet)

31

What is stand alone data acquisition systems often called? * (1 Point)

- ◯ Data Blogger
- ◯ Data Logger
- ◯ Data Reader
- ◯ Digital Blogger

32

What does HMI stand for? * (1 Point)

- ◯ Human Machine Interface
- ◯ Human Machine Interaction
- ◯ Human Machine Implementation
- ◯ Human Machine Industry

33

Changing the control program while the processor is running is called * (1 Point)

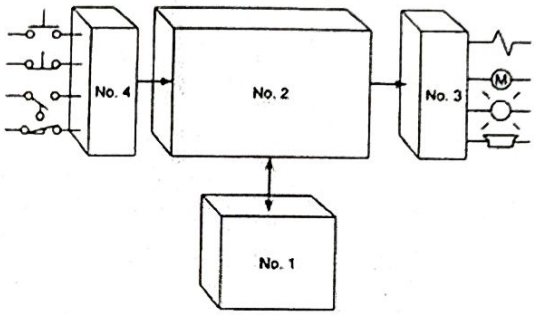
- ◯ On-line programming
- ◯ Texting
- ◯ Forcing
- ◯ Off-line annotation

Part-B (15 Questions * 2 Marks Each)

Answer all the Questions

34

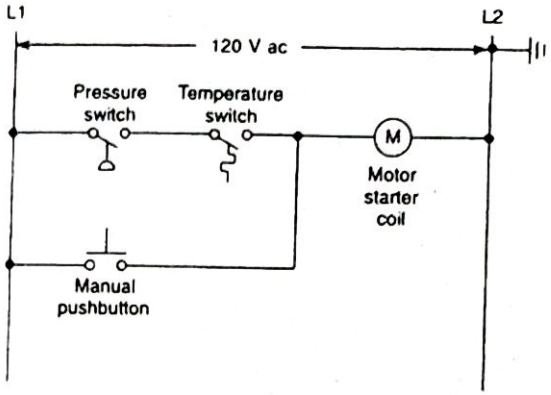
In the PLC block diagram of figure below, block no.1& 2 represents the & respectively: * (2 Points)



- (a) CPU unit & Input module
- (b) Input module & CPU unit
- (c) Programming device & CPU unit
- (d) Output module & Input Module

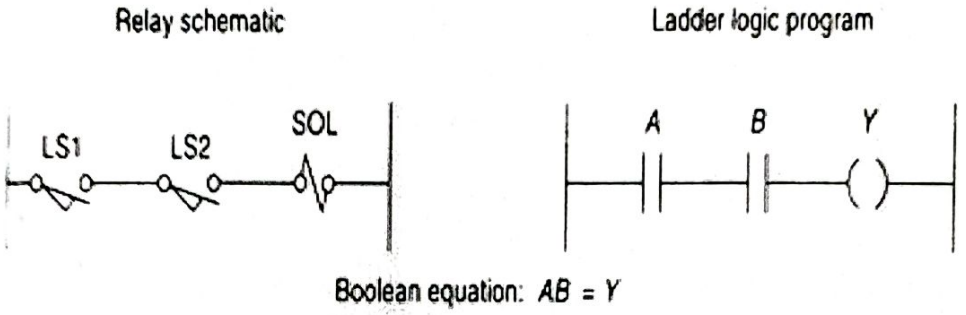
35

In the circuit shown in following figure to energize the starter coil: * (2 Points)



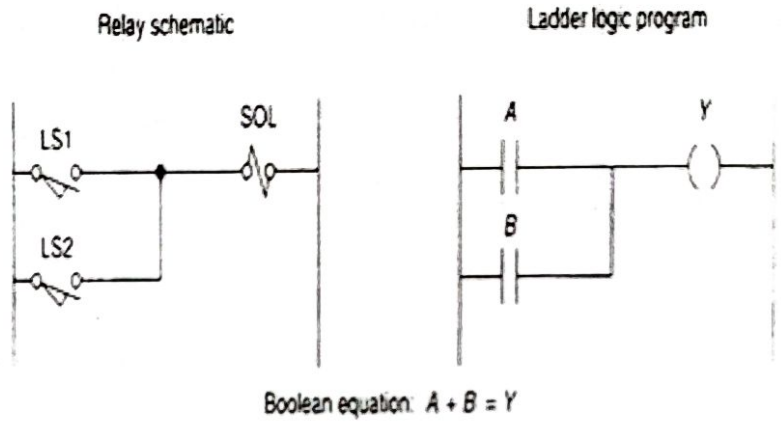
- ◯ the pressure switch, temperature switch, and manual push button must all be closed
- ◯ the pressure switch or temperature switch, or manual push button must be closed
- ◯ the pressure switch and temperature switch must be closed, or manual push button must be closed
- ◯ The pressure or temperature switches or the manual pushbutton and temperature switch must be closed

The relay schematic and Ladder Diagram of figure below using a Boolean Logic of : * (2 Points)



- ◯ AND Gate
- ◯ OR Gate
- ◯ XOR Gate
- ◯ NAND Gate

Program the relay schematic of figure using a PLC and check for operation: * (2 Points)



- ◯ AND Gate
- ◯ OR Gate
- ◯ XOR Gate
- ◯ NAND Gate

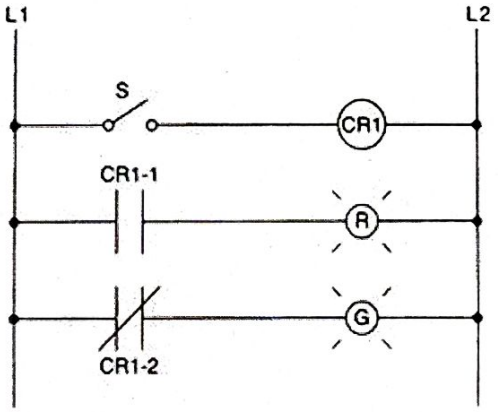
38

The scan is normally a sequential process of: * (2 Points)

- ◯ reading the control logic ,evaluating the output, and updating the input
- ◯ writing the control logic ,evaluating the output, and updating the input
- ◯ reading /writing the status of input and updating the outputs
- ◯ Reading the status of input, evaluating the control logic, and updating the output

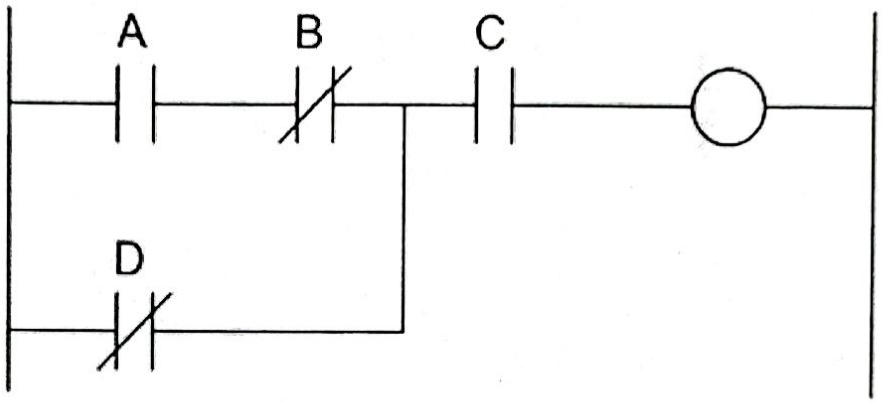
39

In the relay control circuit of figure when the switch is closed: CR1 is * (2 Points)



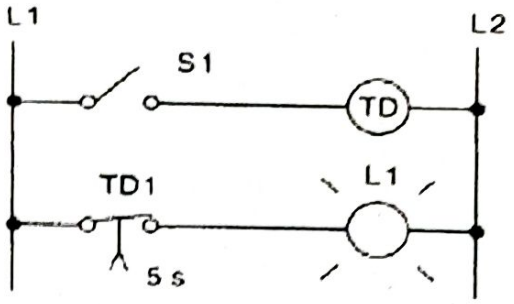
- ◯ (a) Energized,and the red and green lights are both on
- ◯ (b) De-energized,the red light is off,and the green light is on
- ◯ (c) energized,the red light is on,and the green light is off
- ◯ (d) energized,the red light is off,and the green light is on

The Boolean representation of this PLC program is: * (2 Points)



- ◯ (a) ABC + D
- ◯ (b) C + (A + B)D
- ◯ (c) C + D(A + B)
- ◯ (d) C(AB + D)

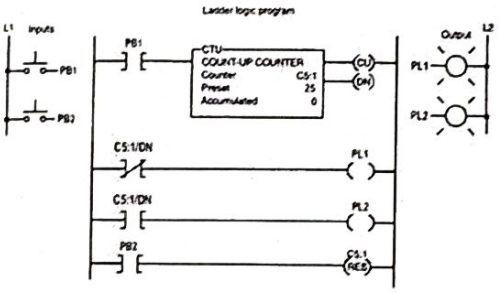
In the circuit shown in below figure, the light will stay on: * (2 Points)



- ◯ as long as S1 is closed
- ◯ for 5s after coil TD is energized
- ◯ for 5s after coil TD is de-energized
- ◯ both a and c

42

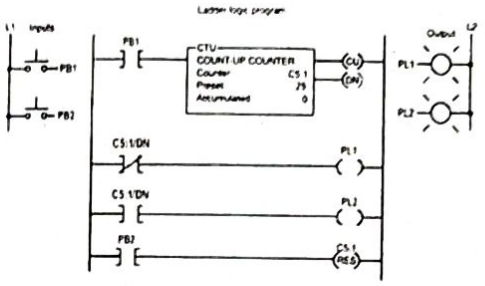
In this program of figure shown below, output PL2 will be energized: * (2 Points)



- ◯ until the accumulated the value equals the preset value
- ◯ when the accumulated value equals the preset value
- ◯ only when the accumulated value is less than 010
- ◯ only when the accumulated value is 999

43

In this program of figure shown below ,output PL1 will be energized : * (2 Points)



- ◯ until the accumulated the value equals the preset value
- ◯ when the accumulated value equals the preset value
- ◯ only when the accumulated value is less than 010
- ◯ only when the accumulated value is 999

44

For which applications SCADA is not recommenced * (2 Points)

- ◯ Automatic Meter Reading (AMR) for electricity
- ◯ Automatic Meter Reading (AMR) for Water
- ◯ Automatic Meter Reading (AMR) for Speed of the Vehicle
- ◯ Automatic Meter Reading (AMR) for Gas

45

For Substation Automation which one of the Control system you refer for achieving complete automation * (2 Points)

- ◯ Microcontroller
- ◯ Programmable Logic Controller
- ◯ Distributed Control System
- ◯ SCADA System

46

The control logic in a programmable logic controller can be programmed by ____ * (2 Points)

- ◯ FBD , ladder logic
- ◯ Sequential logic
- ◯ Structured text
- ◯ All of the above

47

In the water level storage tank, the manual mode program controls the water level by monitoring the _____ switch input * (2 Points)

- ◯ Low sensor switch
- ◯ High sensor switch
- ◯ Middle Level Sensor
- ◯ Proximity Sensor

48

The DC and AC relays works on _____ principle * (2 Points)

- ◯ Motors
- ◯ Electromagnetic induction
- ◯ Electromechanical components
- ◯ Switch

Assessment Test on Value Added Course on "Advanced Industrial Automation"

30	50.3	Active
Responses	Average Score	Status

1. Name of The student (0 point)

30
Responses

Latest Responses
"Bharathi.R"
"Nilesh A "
"Dinesh.k"

5 respondents (**17%**) answered **K** for this question.

2. Enter Your Roll Number (0 point)

30
Responses

Latest Responses
"21umt009"
"21umt022"
"21umt034"

1 respondents (**3%**) answered **21umt017** for this question.

21UMT018 21umt027 21UMT014 21UMT007
21UMT025 21umt016
21UMT006 21UMT013 21umt017 21UMT012 21um
21umt031 21UM
21umt023 21UMT026 21UMT002 21umt024 21UMT
21UMT015

3. Enter Your Register Number (0 point)

30
Responses

Latest Responses
"920421115003"
"920421115011"
"920421115305"

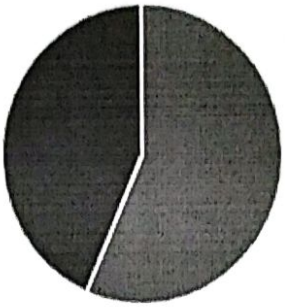
1 respondents (**3%**) answered **920451115002** for this question.

920411125309 920421115304 920421115010 920421115
920421115307 920421115310 920421115015 92
920421115001 920451115002 920421115019
920421115303 920421115018 920421115020 9204
920421115016 920421115009 920421115302
920421115014

4. What is the name of controller in which logic is designed by wires, electrical and electronics devices? (1 point)

43% of respondents (13 of 30) answered this question correctly.

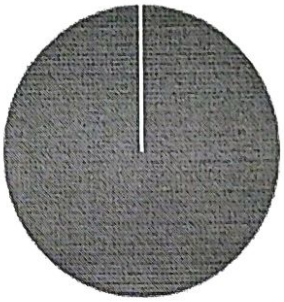
Micro controller	0	
PLC	17	
Relay logic controller	13	✓
CNC	0	



5. What is the name of controller used to control machines in today's industries? (1 point)

100% of respondents (30 of 30) answered this question correctly.

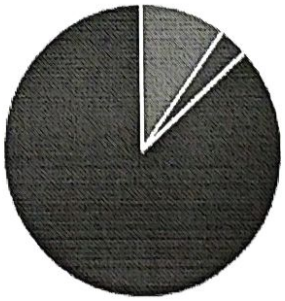
Micro controller	0	
PLC	30	✓
Relay logic controller	0	
Arduino	0	



6. Basically, the function of a PLC is to: (1 point)

87% of respondents (26 of 30) answered this question correctly.

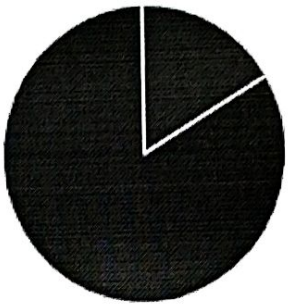
amplify various weak signal sour...	0	
Control a high voltage output w...	3	
control the speed of motors	1	
make logical decisions and prov...	26	✓



7. The basic difference between a PLC and relay control system is that_____ (1 point)

83% of respondents (25 of 30) answered this question correctly.

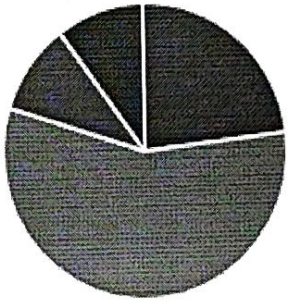
different type of input devices a...	5	
different types of output device...	0	
different types of output voltag...	0	
one uses relay control logic and...	25	✓



8. Which is not the type of PLC input output terminals? (1 point)

57% of respondents (17 of 30) answered this question correctly.

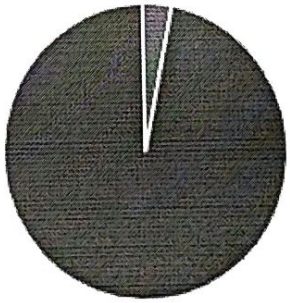
Triac	7	
Contactor	17	✓
Transistor	3	
Relay	3	



9. What is the product name of Mitsubishi PLC? (1 point)

97% of respondents (29 of 30) answered this question correctly.

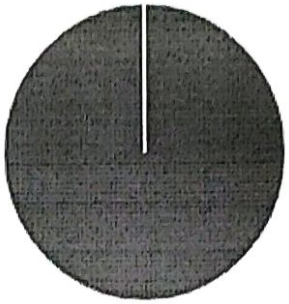
Rockwell	0	
Simatic	1	
Melsec	29	✓
DELTA	0	



10. What is the name of software used for Mitsubishi PLC? (1 point)

100% of respondents (30 of 30) answered this question correctly.

GX Works	0	
GX Developer	30	✓
Mitsubishi manager	0	
Simatic manager	0	



11. What is the device name used to provide 24 DC in PLC wiring? (1 point)

93% of respondents (28 of 30) answered this question correctly.

RPS	0	
Battery	0	
Transformer	2	
SMPS	28	✓

12. Which device is used to control parameters of an induction motor? (1 point)

93% of respondents (28 of 30) answered this question correctly.

PLC	0	
HMI	2	
VFD	28	✓
DAC	0	

13. Which device is used to connect analog sensor with PLC? (1 point)

80% of respondents (24 of 30) answered this question correctly.

ADC	24	✓
DAC	1	
PLC	4	
Arduino	1	

14. The input interface module: (1 point)

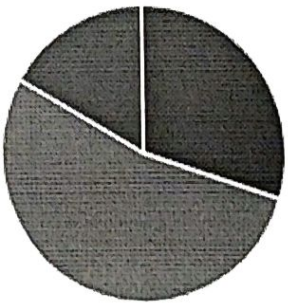
67% of respondents (20 of 30) answered this question correctly.

condition the signal received fro...	20	✓
allow the programmer to input t...	6	
allows the CPU to input messag...	0	
Provides inputs to motor contro...	4	

15. The output interface module connects to: (1 point)

53% of respondents (16 of 30) answered this question correctly.

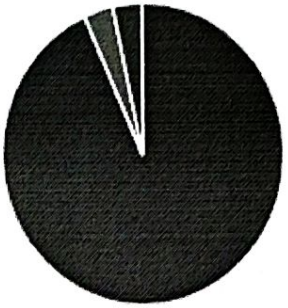
Sensing devices such as switche...	9	
load device such as lamps or sol...	16	✓
the programming device that co...	5	
the tape or disc drive circuits	0	



16. Which Module of the PLC connects to field devices such as Push buttons, Sensors, Limit Switches? (1 point)

93% of respondents (28 of 30) answered this question correctly.

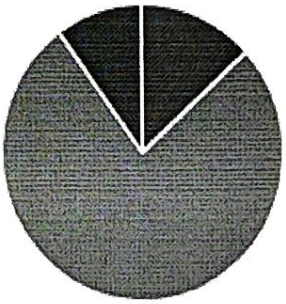
Input	28	✓
Power supply	1	
output	1	
Memory	0	



17. One function of a PLC output interface module is to: (1 point)

77% of respondents (23 of 30) answered this question correctly.

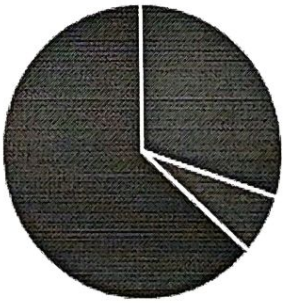
accept signals from the process ...	4	
convert signals from the proces...	23	✓
input signals from the program...	0	
Interpret and execute the user p...	3	



18. The location of the specific input or output field device is identified by the processor by means of its: (1 point)

63% of respondents (19 of 30) answered this question correctly.

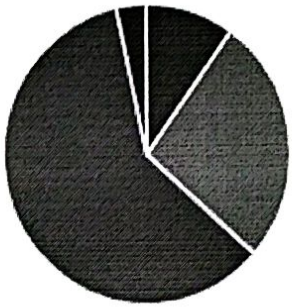
voltage rating	9	
current rating	0	
Wattage rating	2	
Address	19	✓



19. The discrete output interface module is designed to provide: (1 point)

60% of respondents (18 of 30) answered this question correctly.

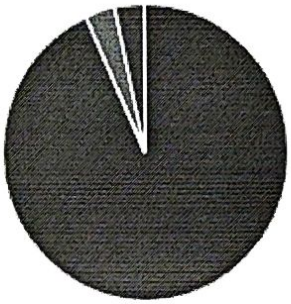
output voltages in the 5V DC ra...	3	
varying AC or DC voltages depe...	8	
simple on or off switching control	18	✓
binary coded output	1	



20. Which of the following memory types often referred to as read/write memory (1 point)

93% of respondents (28 of 30) answered this question correctly.

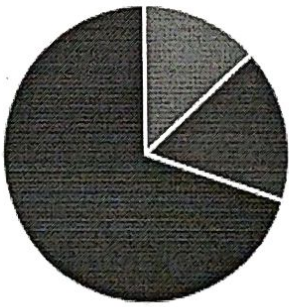
RAM	28	✓
PROM	1	
EPROM	1	
EEPROM	0	



21. The most common form of memory used to store, back up, or transfer PLC program is: (1 point)

70% of respondents (21 of 30) answered this question correctly.

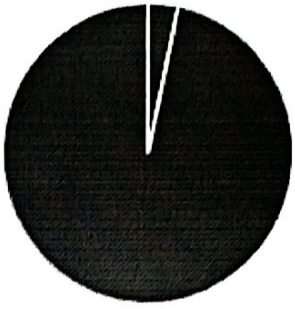
RAM	0	
PROM	4	
EPROM	5	
EEPROM	21	✓



22. The maximum number of rungs allowed in Ladder Logic Program is: (1 point)

97% of respondents (29 of 30) answered this question correctly.

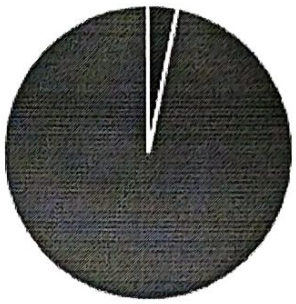
one	1	
Two	0	
Three	0	
limited only by the memory size	29	✓



23. PLC can be ____ in plant to change the sequence of operation. (1 point)

97% of respondents (29 of 30) answered this question correctly.

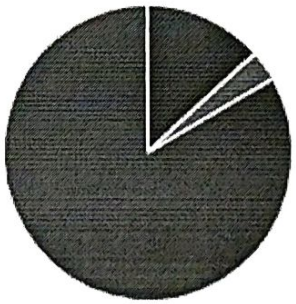
only programmed	1	
only reprogrammed	0	
programmed and reprogrammed	29	✓
able to give a set point	0	



24. A limit switch is usually actuated by_---------- (1 point)

83% of respondents (25 of 30) answered this question correctly.

hand	4	
pressure	1	
contact with an object	25	✓
electromagnet	0	



25. The PLC counter instruction is similar to the: (1 point)

93% of respondents (28 of 30) answered this question correctly.

internal relay instruction	1	
transitional contact instruction	0	
relay coil and contact instruction	1	
timer instruction	28	✓

26. The RES instruction: (1 point)

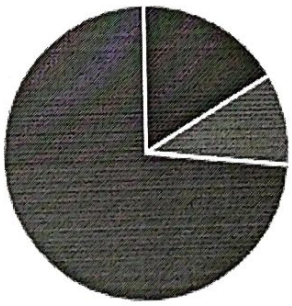
83% of respondents (25 of 30) answered this question correctly.

is used to reset the counter	25	✓
is given the same reference add...	0	
decrements the count when act...	0	
both a and b	5	

27. Normally counters are retentive. This means that if your accumulated count is up to 0300 and power to your system is lost, when power is restored the accumulated count will be: (1 point)

73% of respondents (22 of 30) answered this question correctly.

0000	5	
0250	3	
0300	22	✓
0999	0	



28. Which of the following is not associated with a PLC Counter Instruction? (1 point)

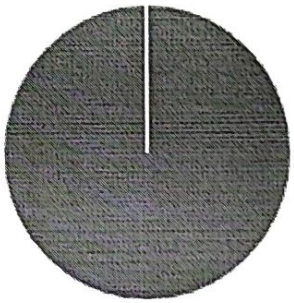
50% of respondents (15 of 30) answered this question correctly.

Preset Value	0	
Time Base	11	
Address	15	✓
Accumulated Value	4	

29. What is the full form of SCADA? (1 point)

100% of respondents (30 of 30) answered this question correctly.

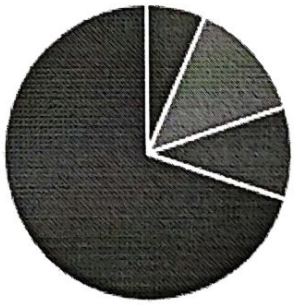
Supervisory Control and Docum...	0	
Supervisory Control and Data A...	30	✓
Supervisory Column and Data A...	0	
Supervisory Column and Data A...	0	



30. The advantage of RS-232C is (1 point)

70% of respondents (21 of 30) answered this question correctly.

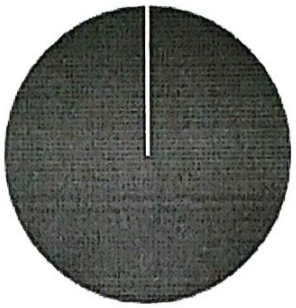
limited speed of communication	2	
high-voltage level signaling	4	
big-size communication adapters	3	
Small Distance (upto 50 feet)	21	✓



31. What is stand alone data acquisition systems often called? (1 point)

100% of respondents (30 of 30) answered this question correctly.

Data Blogger	0	
Data Logger	30	✓
Data Reader	0	
Digital Blogger	0	



32. What does HMI stand for? (1 point)

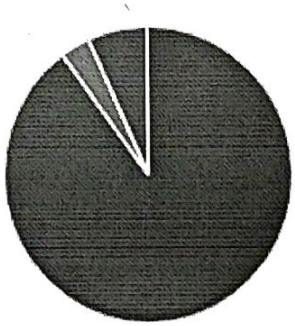
97% of respondents (29 of 30) answered this question correctly.

Human Machine Interface	29	✓
Human Machine Interaction	1	
Human Machine Implementation	0	
Human Machine Industry	0	

33. Changing the control program while the processor is running is called (1 point)

90% of respondents (27 of 30) answered this question correctly.

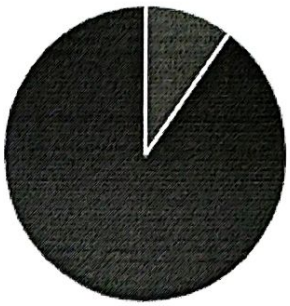
On-line programming	27	✓
Texting	1	
Forcing	2	
Off-line annotation	0	



34. In the PLC block diagram of figure below, block no.1& 2 represents the & respectively: (2 points)

90% of respondents (27 of 30) answered this question correctly.

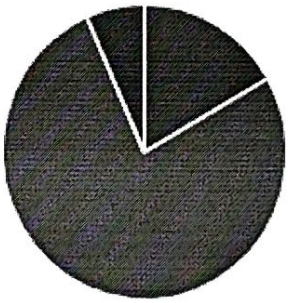
(a) CPU unit & Input module	0	
(b) Input module & CPU unit	3	
(c) Programming device & CPU ...	27	✓
(d) Output module & Input Mo...	0	



35. In the circuit shown in following figure to energize the starter coil: (2 points)

77% of respondents (23 of 30) answered this question correctly.

the pressure switch, temperatur...	5	
the pressure switch or temperat...	0	
the pressure switch and temper...	23	✓
The pressure or temperature swi...	2	



36. The relay schematic and Ladder Diagram of figure below using a Boolean Logic of : (2 points)

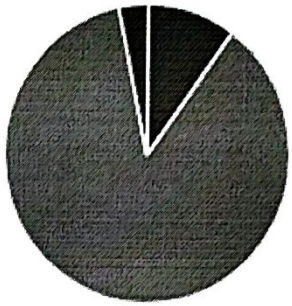
93% of respondents (28 of 30) answered this question correctly.

AND Gate	28	✓
OR Gate	0	
XOR Gate	1	
NAND Gate	1	

37. Program the relay schematic of figure using a PLC and check for operation: (2 points)

87% of respondents (26 of 30) answered this question correctly.

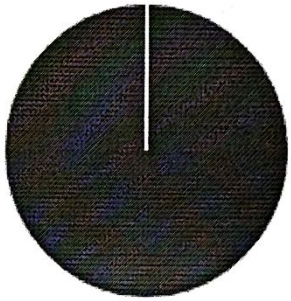
AND Gate	3	
OR Gate	26	✓
XOR Gate	0	
NAND Gate	1	



38. The scan is normally a sequential process of: (2 points)

100% of respondents (30 of 30) answered this question correctly.

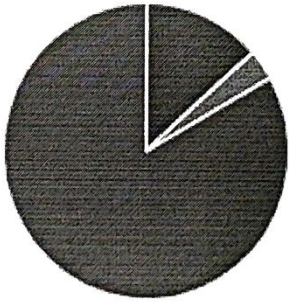
reading the control logic ,evalua...	0	
writing the control logic ,evaluat...	0	
reading /writing the status of in...	0	
Reading the status of input, eval...	30	✓



39. In the relay control circuit of figure when the switch is closed: CR1 is (2 points)

83% of respondents (25 of 30) answered this question correctly.

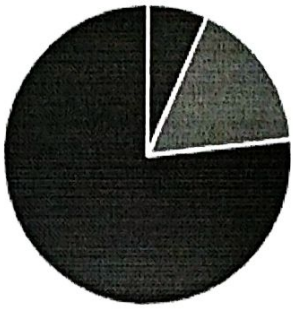
(a) Energized,and the red and gr...	4	
(b) De-energized,the red light is...	1	
(c) energized,the red light is on,...	25	✓
(d) energized,the red light is off,...	0	



40. The Boolean representation of this PLC program is: (2 points)

77% of respondents (23 of 30) answered this question correctly.

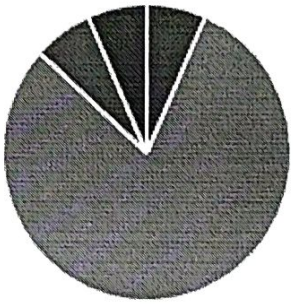
(a) ABC + D	2	
(b) C + (A + B)D	5	
(c) C + D(A + B)	0	
(d) C(AB + D)	23	✓



41. In the circuit shown in below figure, the light will stay on: (2 points)

80% of respondents (24 of 30) answered this question correctly.

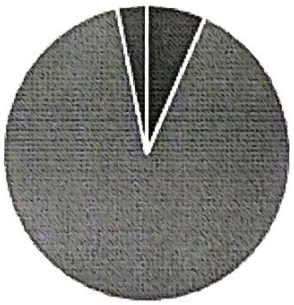
as long as S1 is closed	2	
for 5s after coil TD is energized	24	✓
for 5s after coil TD is de-energiz...	2	
both a and c	2	



42. In this program of figure shown below, output PL2 will be energized: (2 points)

90% of respondents (27 of 30) answered this question correctly.

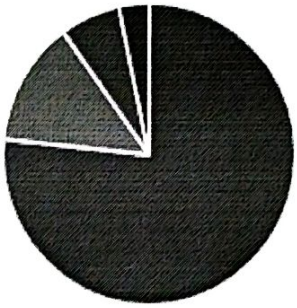
until the accumulated the value ...	2	
when the accumulated value eq...	27	✓
only when the accumulated valu...	1	
only when the accumulated valu...	0	



43. In this program of figure shown below ,output PL1 will be energized : (2 points)

77% of respondents (23 of 30) answered this question correctly.

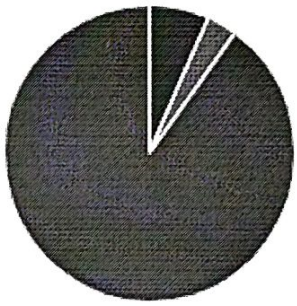
until the accumulated the value ...	23	✓
when the accumulated value eq...	4	
only when the accumulated valu...	2	
only when the accumulated valu...	1	



44. For which applications SCADA is not recommenced (2 points)

90% of respondents (27 of 30) answered this question correctly.

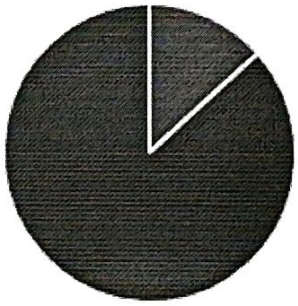
Automatic Meter Reading (AMR...	2	
Automatic Meter Reading (AMR...	1	
Automatic Meter Reading (AMR...	27	✓
Automatic Meter Reading (AMR...	0	



45. For Substation Automation which one of the Control system you refer for achieving complete automation (2 points)

87% of respondents (26 of 30) answered this question correctly.

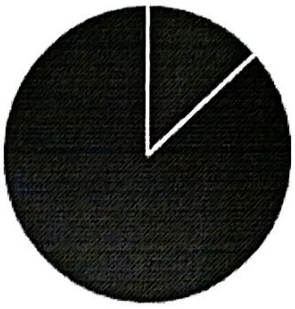
Microcontroller	0	
Programmable Logic Controller	0	
Distributed Control System	4	
SCADA System	26	✓



46. The control logic in a programmable logic controller can be programmed by ____ (2 points)

87% of respondents (26 of 30) answered this question correctly.

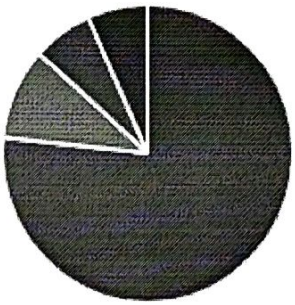
FBD , ladder logic	4	
Sequential logic	0	
Structured text	0	
All of the above	26	✓



47. In the water level storage tank, the manual mode program controls the water level by monitoring the _____ switch input (2 points)

77% of respondents (23 of 30) answered this question correctly.

Low sensor switch	23	✓
High sensor switch	3	
Middle Level Sensor	2	
Proximity Sensor	2	



48. The DC and AC relays works on _____ principle (2 points)

100% of respondents (30 of 30) answered this question correctly.

Motors	0	
Electromagnetic induction	30	✓
Electromechanical components	0	
Switch	0	

VAC - Coordinator.

HOD/MTRE

Value added course on "Advanced Industrial Automation" from 07-08-2023 to 12-08-2023

Send reminder to people who have not responded. Remind them

28	02:14	Active
Responses	Average time to complete	Status

1. Name of the Student

28 Responses

Latest Responses
"Giri P "
"Selvamani"
"Nilesh A "

Update

3 respondents (12%) answered **K** for this question.

kumar TSJegadhish Pandiaraj Mithun SMOHAMMED AMMAR Ari vishnuR CLakshman hari PSubash chandru Poisollan G **K** G GS JSaroj Kanna Arun pratop SArshad parwesh Parvatha rajan Kishourekumar D BALA KARTHIK KESAKKI BALA Sri Ramachandran MUTHUPANDI V

2. Enter Your Roll Number

28 Responses

Latest Responses
"21UMT006"
"21umt007"
"21umt022"

Update

1 respondents (4%) answered **21umt025** for this question.

21umt034 21UMT015 21umt033 21umt030 21umt012 21UMT003 21UMT021 21umt023 21UMT001 21umt025 21umt026 21umt018 21umt004 21umt009 21umt031 21UMT002 21umt020 21umt013 21UMT014 21umt016

3. Enter Your Register Number

28
Responses

Latest Responses
"920421115004"
"920421115016"
"920421115011"

Update

1 respondents (4%) answered **920421115303** for this question.

920421115010 **920421115018** 920421115017 **920421115003**
920421115013 **920421115012** **920421115006** **920421115304**
920421115008 **920421115303** 920421115308
920421115019 920421115302 **920421115301** **9204211115014**
920421115001 920421115309 **920421115020** 920421115305
920421115009

4. Year & Department

28
Responses

Latest Responses
"III & Mechatronics "
"Mtr"
"3year Mechatronics Engineering Department "

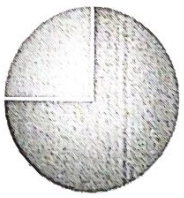
Update

4 respondents (15%) answered **year - Mechatronics** for this question.

year & mechatronics III Engineering Department
3yrs **year - Mechatronics** MTR
MTRE 3rd year rd year **Mechatronics engineering**

5. Did this session increase your team spirit?

Strongly Agree	21
Agree	7
Disagree	0
Strongly disagree	0



6. Did this session helped in increasing your technical knowledge on Industrial Automation?

Strongly Agree	22
Agree	6
Disagree	0
Strongly disagree	0

7. Did you enjoy learning this hands on way?

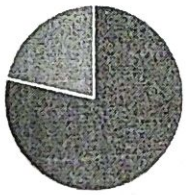
Strongly Agree	24
Agree	4
Disagree	0
Strongly disagree	0

8. Did the Technical Presentations is organized in a sequential manner ?

Strongly Agree	20
Agree	8
Disagree	0
Strongly disagree	0

9. Did the Value Added Course is Effective?

Strongly Agree	22
Agree	6
Disagree	0
Strongly disagree	0



10. Were the Course Materials are useful?

Strongly Agree	20
Agree	8
Disagree	0
Strongly disagree	0

11. Whether the lab facilities are adequate ?

Strongly agree	17
Agree	10
Disagree	1
Strongly disagree	0

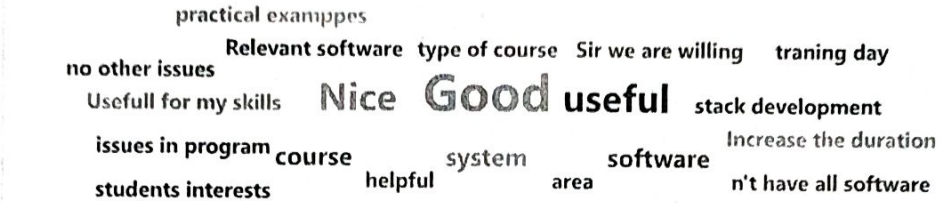
12. Any other points to improve the conduct of program like Value added Course in future.

27
Responses

Latest Responses
"Conduct 2 days "
"No"
"No"

Update

4 respondents (15%) answered **Good** for this question.



VAC – Co Ordinator.

HOD/MTRE

View results

Respondent

1 ARSHAD PARWESH

01:54
Time to complete

1. Name of the Student *

S Arshad parwesh

2. Enter Your Roll Number *

21umt029

3. Enter Your Register Number *

920421115303

4. Year & Department *

Third year - Mechatronics engineering

5. Did this session increase your team spirit? *

- (●) Strongly Agree
- ( ) Agree
- ( ) Disagree
- ( ) Strongly disagree

6. Did this session helped in increasing your technical knowledge on Industrial Automation? *

- (●) Strongly Agree
- ( ) Agree
- ( ) Disagree
- ( ) Strongly disagree

7. Did you enjoy learning this hands on way? *

- (●) Strongly Agree
- ( ) Agree
- ( ) Disagree
- ( ) Strongly disagree

8. Did the Technical Presentations is organized in a sequential manner ? *

- (●) Strongly Agree
- ( ) Agree
- ( ) Disagree
- ( ) Strongly disagree

9. Did the Value Added Course is Effective? *

- ( ) Strongly Agree
- (●) Agree
- ( ) Disagree
- ( ) Strongly disagree

10. Were the Course Materials are useful? *

- (●) Strongly Agree
- ( ) Agree
- ( ) Disagree
- ( ) Strongly disagree

11. Whether the lab facilities are adequate ? *

- (●) Strongly agree
- ( ) Agree
- ( ) Disagree
- ( ) Strongly disagree

12. Any other points to improve the conduct of program like Value added Course in future. *

This type of course is useful to us

VAC - coordinator.

HOD/MSRE

View results

Respondent

10 ARAVINDH AARYA G

05:38
Time to complete

1. Name of the Student *

G.AravindhAarya

2. Enter Your Roll Number *

21UMT002

3. Enter Your Register Number *

920421115001

4. Year & Department *

III MTRE

5. Did this session increase your team spirit? *

- (●) Strongly Agree
- ( ) Agree
- ( ) Disagree
- ( ) Strongly disagree

6. Did this session helped in increasing your technical knowledge on Industrial Automation? *

- (●) Strongly Agree
- ( ) Agree
- ( ) Disagree
- ( ) Strongly disagree

7. Did you enjoy learning this hands on way? *

- Strongly Agree
- Agree
- Disagree
- Strongly disagree

8. Did the Technical Presentations is organized in a sequential manner ? *

- Strongly Agree
- Agree
- Disagree
- Strongly disagree

9. Did the Value Added Course is Effective? *

- Strongly Agree
- Agree
- Disagree
- Strongly disagree

10. Were the Course Materials are useful? *

- Strongly Agree
- Agree
- Disagree
- Strongly disagree

11. Whether the lab facilities are adequate ? *

- Strongly agree
- Agree
- Disagree
- Strongly disagree

12. Any other points to improve the conduct of program like Value added Course in future. *

Yes it was very useful to us

VAC - Coordinator.

HOD/MTRE

View results

Respondent

15 POISOLLAN G A

02:09
Time to complete

1. Name of the Student *

Poisollan G A

2. Enter Your Roll Number *

21unmt023

3. Enter Your Register Number *

920421115013

4. Year & Department *

III-MTR

5. Did this session increase your team spirit? *

- ○ Strongly Agree
- ◉ Agree
- ○ Disagree
- ○ Strongly disagree

6. Did this session helped in increasing your technical knowledge on Industrial Automation? *

- ◉ Strongly Agree
- ○ Agree
- ○ Disagree
- ○ Strongly disagree

7. Did you enjoy learning this hands on way?

- Strongly Agree
- Agree
- Disagree
- Strongly disagree

8. Did the Technical Presentations is organized in a sequential manner ? *

- Strongly Agree
- Agree
- Disagree
- Strongly disagree

9. Did the Value Added Course is Effective? *

- Strongly Agree
- Agree
- Disagree
- Strongly disagree

10. Were the Course Materials are useful? *

- Strongly Agree
- Agree
- Disagree
- Strongly disagree

11. Whether the lab facilities are adequate ? *

- Strongly agree
- Agree
- Disagree
- Strongly disagree

12. Any other points to improve the conduct of program like Value added Course in future. *

Increase the duration

VAC - Coordinator

HOD/MTRE

View results

Respondent

16 ARUN PRATOP.K

02:39
Time to complete

1. Name of the Student *

Arun pratop K

2. Enter Your Roll Number *

21umt033

3. Enter Your Register Number *

920421115304

4. Year & Department *

3 rd year mechatronics engineering

5. Did this session increase your team spirit? *

- (●) Strongly Agree
- ( ) Agree
- ( ) Disagree
- ( ) Strongly disagree

6. Did this session helped in increasing your technical knowledge on Industrial Automation? *

- (●) Strongly Agree
- ( ) Agree
- ( ) Disagree
- ( ) Strongly disagree

7. Did you enjoy learning this hands on way?

- Strongly Agree
- Agree
- Disagree
- Strongly disagree

8. Did the Technical Presentations is organized in a sequential manner ? *

- Strongly Agree
- Agree
- Disagree
- Strongly disagree

9. Did the Value Added Course is Effective? *

- Strongly Agree
- Agree
- Disagree
- Strongly disagree

10. Were the Course Materials are useful? *

- Strongly Agree
- Agree
- Disagree
- Strongly disagree

11. Whether the lab facilities are adequate ? *

- Strongly agree
- Agree
- Disagree
- Strongly disagree

12. Any other points to improve the conduct of program like Value added Course in future. *

Usefull for my skills

VAC-Coordinator

HOD/MTRE

INDWELL Automation
Workshop Of Automatic Systems
PLC, HMI, SCADA, DRIVES TRAINING & PROJECTS
(MSME Registered and ISO 9001-2015 certified)

To, The Principal, KAMRAK COLLEGE of ENGINEERING &TECHNOLOGY, Virudhunagar, Tamil Nadu.		Invoice No: INDKCET07120823 Date: 21- 08- 2023
Individual		**Amount**
Advanced Industrial Automation Training for 30 students from Mechatronics branch. Travel allowance **Total**		**45000/-** **(Rupees forty-five thousand)** **5000/-** **(Rupees five thousand)** **50000/-** **(Rupees fifty thousand only)**

Bank detail:
HIMANSHU KUMAR
A/C No: 3073 5086 901
SBI, Basudeopur
IFSC: SBIN0003601
PAN: AZUPK7424M

INDWELL AUTOMATION MANGALURU

Managing Director
Indwell Automation

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