

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

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Technology Training Programme on Industrial Robotics



2022-23 (Even Semester) III & IV Year EEE (06.03.2023 to 11.03.2023)

Trained by

Axis Global Automation, Coimbatore



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From

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

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

Respected Sir,

Sub: Requesting Approval of conducting Technological Teaching for III and IV Year EEE Students-Reg

The **Department of EEE** has planned to conduct Technological Teaching for Third and Final year Students on "Industrial Robotics" which is scheduled in March 2023. The quotation details, syllabus and Training Schedule are attached with this letter. Kindly do the needful sir.

Technological	Name of the	Total	No. of	Duration	Amount	Coordinator/Faculty in
Training	Company	No.of	Hours			Charges
		Students				
Industrial	Axis Global	64	40	06.03.23	Rs.1,28,000	D.Manoj,A.P/EEE
Robotics	Automation,			to		P.Siva
8	Coimbatore			11.03.23		Subramanian, A.P/EEE
						G.Sathish Kumar, A.P/EEE

Resource Person Details:

- 1. Er.S.Sudhakar, Sr.Business Development Engineer
- 2. Er.R.Nagarjun, Application Engineer
- 3. Er.S:Loganathan ,Application Engineer

Thanking you.

Yours faithfully

(Dr.G.MohanBabu)





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Dindigul-Palani Highway, Dindigul-624002

CIRCULAR

25/02/2023

This is to inform that six days training program on INDUSTRIAL ROBOTICS is going to conduct for IV & III YEAR EEE students from 27.02.2023 to 04.03.2023, by AXIS GLOBAL AUTOMATION, Coimbatore. All the students are informed to attend and enrich your knowledge.

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ATTENDANCE SHEET

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING	TECHNOLOGY TRAINING C

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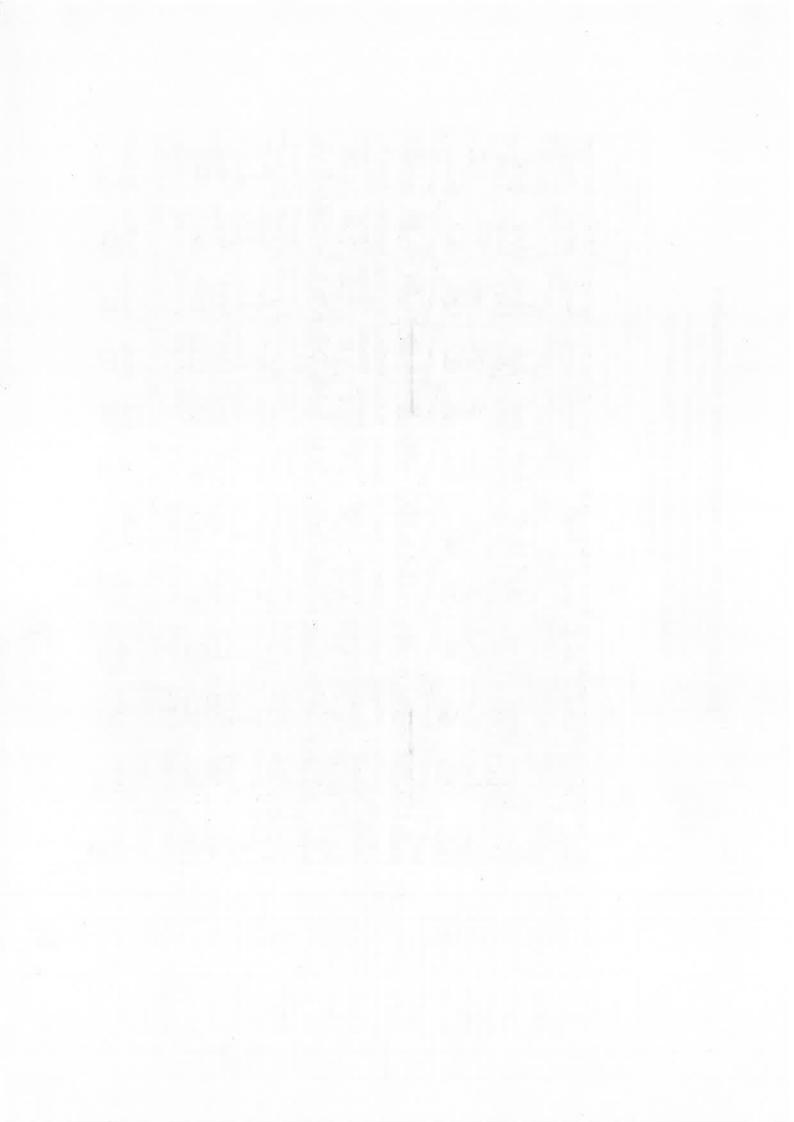


Sindalagundu post, Dindigul-624002, Tamilnadu.Ph:0451-2448800 DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING TECHNOLOĞY TRAINING ON "INDUSTRIAL ROBOTICS"

		06.03.23	3.23	07,03,23	3.23	08.03.23	3.23	09.03.23	3.23	10.03.23	3.23	11.03.23	3.23
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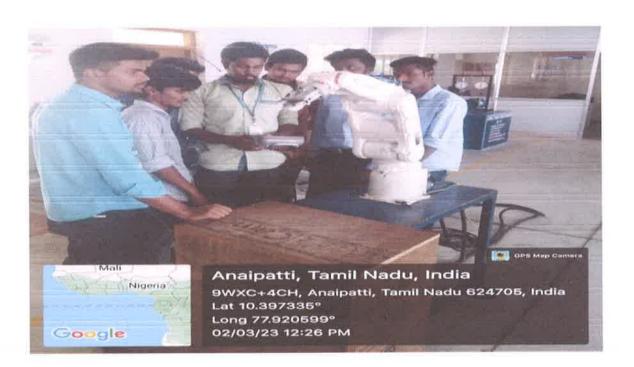




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Summary Report

The department of Electrical and Electronics Engineering, SSM Institute of Engineering and Technology conducted **Technology training on Industrial Robotics** from 6th March 2023 to 11th March 2023. The course covered topics the anatomy of industrial robots deals with the assembling of outer components of a robot such as wrist, arm and body. Before jumping into robot configurations, here are some of the key facts about robot anatomy. (a) Joints and Links (b) Common Robot Configurations. Students have attended assessment tests at the end of the course and certificates were issued. The students from third and final year EEE attended the course and got benefitted.





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OFFER No: AGIIT/VAP/CBE/22-23/115 OFFER DATE:22.02.2023

CUSTOMER: SSM Institute of Engineering and Technology

KIND ATTEN :Mr.MANOJ

TRAINING PROGRAM: VALUE ADDED PROGRAM (VAP)

CONTENTS:

1. INTRODUCTION

RESEARCH & DEVELOPMENT TEAM

2. TRAINING METHODOLOGY

3. TRAINING HIGHLIGHTS

4. TRAINING BENEFITS

- 5. SPECIFIC AREAS OF EXCELLENCE
- 6. OUR GLOBAL PRESENCE
- 7. OUR TRAINING BRANDS
- 8. OUR CLIENTS
- 9. TERMS & CONDITIONS



1. INTRODUCTION

Axis Global Automation Group of Companies is one of India's leading Industrial Automation and Robotics Engineering Solution provider. The company provides complete turnkey solutions for the automation needs of all industries. The company has a dedicated manufacturing unit for control panels. The company is the industry channel partner for Yaskawa Motoman in India. Key industries catered to include automotive industries, manufacturing and process industries, food & beverage industries, oil & gas, chemical, biotechnology and pharmaceutical industries.

Our Services include:

- Engineering & Consulting in Automation Controls Robotics
- Installation & Commissioning Services
- Maintenance & Field Services
- New Product Development
- Control Panel Manufacturing
- Special Purpose Machines (Laser Cutting Machines etc.)
- Machine Tending Services (Automated and Robotics Systems)
- Retrofit Projects

Axis Global Automation today is a multi-faceted business group with interests in two business domains including:

- Industrial Automation & Robotics System Integration 1.
- New Product Development (Special Purpose Machines, Customized Robotic 2. Solutions, etc.)
- **Technical Training** 3.

Axis Global Institute of Industrial Training (AGIIT) is the leading Industrial Automation



& Robotics technical training campus in India. We offer real-time, hands-on industry oriented training in technologies such as PLC, SCADA, DCS, HMI, VFD, Servo as well as Robotics. We are the exclusive training partner for Yaskawa Motoman Japan and also have strategic training partnerships with OEMs such as Horner, Siemens, and Wago

Research & Development Teamon

The industrial experts from Axis Global Automation run a R&D unit that is responsible for ensuring that our industrial solutions meet global standards and enable our clients achieve operational excellence. Our R&D unit is also responsible for constantly upgrading our technical training content to ensure that we stay abreast with the development in the automation and robotics sector.

2. TRAINING METHODOLOGY:

- Hands-On practical training
- Live Demonstrations
- Work on real-time industrial projects
- Industry Expert Lectures & Seminars for Learning the current technology trends
- Case Studies for conceptual training

3. TRAINING HIGHLIGHTS:

- Fully Equipped Advanced Lab
- Mobile Training Unit for Training Off-Campus
- Hands-on, Practical, Industry Oriented Training
- Case Studies For Various Processes



- Individual Focus
- Industry Experts as trainers
- Real Time Projects
- On-site Industrial Training

4. TRAINING BENEFITS:

- Understand the need and application of automation in industries
- Comprehensive programming, designing and troubleshooting knowledge on automation and robotics tools and technologies
- Enable selection, deployment and maintenance of automation and robotics tools in the industries
- Practical training that enables candidates to be deployed immediately on-the-job

5. SPECIFIC AREAS OF EXCELLENCE:

Oil & Gas

Food & Beverages

Machine Builder Solutions (OEM)

Metals, Mining, Cement

Packaging & Publishing

Power and Electricity

Automotive & Transportation

Pharmaceuticals

Building Management Systems

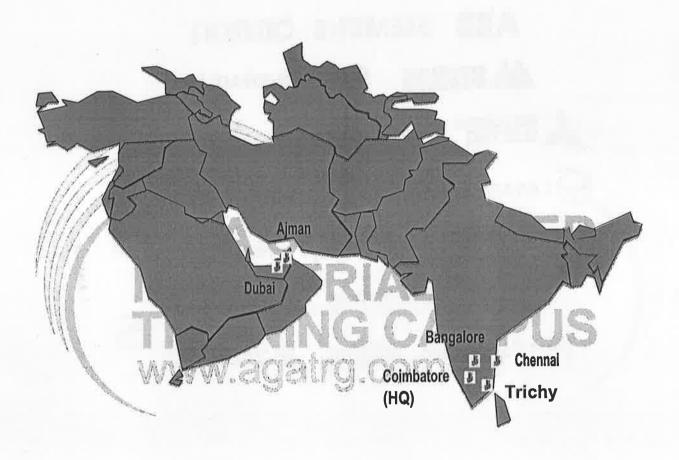
Paper, Pulp and Sugar Printing,

Textile & Fiber

Water, Waste-water Plants



6. OUR GLOBAL PRESENCE:





7. OUR TRAINING BRANDS:

ABB SIEMENS OMRON

















KEYENCE

Panasonic.

Honeywell





Schneider Electric









8. OUR CLIENTS:



































































Techzone Engineering, Chennai

Customized Training Clients



















9. VALUE ADDED PROGRAM PROPOSAL & OVERVIEW:

Trainin	g On	Duration in days 7hrs /day	Fees per student (plus 18% GST)
ed in Industria PLC & SKAWA MOT SIM S/WSIMU		5 Days	2000/-
SKAWA MOT	OMAN, JLATIONI		2000/



Our Services

Industrial Based Training | Industrial Based Projects |
Industrial Workshops Industrial Seminars | Guest
Lectures | Staff Training | Industrial Visit | Placements
Institutional Lab Requirements | Industrial Lab
Requirements

Center of Excellence (COE) – Advanced Research Lab for Robotics & Automation

Thanks & Regards

Sudhakar. S

Sr.Business Development
Engineer
AGIIT

9655 758 759 & 9841 731 732



*From Axis Global Automation:

- 1. Trainers
- 2. Necessary Software & Materials as per the training Modules
- 3. Certificates from our end after completion.

*From College:

- 1. Student strength of Minimum 45 Nos
- 2. Seminar Hall, Classroom Facilities, LCD Projector & Speakers system
- 3. Lab Facilities with upgraded XP-2 OS systems (Max. 2 Student per system)
- 4. Accommodation Facilities & Food Facilities for our Trainers, if applicable
- 5. Vehicles Facilities for Transportation of Materials, if applicable

10. TERMS & CONDITIONS

PAYMENTS, DUTIES & TAXES:

- 1. The prices quoted are exclusive of 18% GST (i.e. Central GST/ State GST).
- 2. TDS @ 10% Extra as May applicable at the time of Training.
- 3. 100% of Training fees payment should be receipt at the time of 100% training completion.



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TECHNOLOGY TRAINING ON "INDUSTRIAL ROBOTICS MARK STATEMENT

		WARK STATEMEN	
S. No.	Reg.no.	Student Name	MARK
1	922119105001	ABINAYA S S	24
2	922119105002	ANIESH ANGEL A	20
3	922119105003	ARUL NITHISH KUMAR R	18
4	922119105004	BEBINA RITHIKA J	6
5	922119105005	BRUMMA THAMO THARAN M	12
6	922119105006	DHEEPAN KUMAR G	6
7	922119105007	DHILIP LAKSHMAN V	8
8	922119105008	ESHWAR J	16
9	922119105009	GNANA AROCKYA AMALI B	
10	922119105010	GOKULA PANDIYAN A	20
11	922119105011	HARINI M	22
12	922119105012	HARIPRASATH S	12
13	922119105013	HEMALATHA S	9
14	922119105014	KARTHIKEYAN B	13
15	922119105016	KRISHNA LEELA S	9
16	922119105017	MANJULA S	12
17	922119105018	MANOJ KUMAR A	5

S. No.	Reg.no.	Student Name	MARK
18	922119105019	MOHAMMED HAFEES A	16
19	922119105020	MOHAMMED JAVITH S	7
20	922119105021	MOUNA JOTHI M	13
21	922119105022	MUTHUKUMAR R	16
22	922119105023	NAGARANI M	2
23	922119105024	NASEER HUSSAIN S	12
24	922119105025	PRAKASH T	12
25	922119105026	PREETHIKA J	21
26	922119105027	PUNITHA VIJAYASRI P	15
27	922119105028	RAJESH MANI K	18
28	922119105029	RESHMA P	23
2.9	922119105030	RISHIKARAN	16
30	922119105031	ROBIN NICHOLAS S	18
31	922119105032	SANGAVI SRI M	21
32	922119105033	SARAVANAN R	06
33	922119105034	SHAGIL P	10
34	922119105035	SHALINI T	21
35	922119105036	SIVASUBRAMANI S	16
36	922119105037	SRI VARSHAN K	18
37	922119105038	SURIYA SELVAM I	5
38	922119105039	VAISHNAVI C	10
39	922119105040	VINITH PRAVEEN KUMAR V	12.
40	922119105041	VINOTH KUMAR S	8
41	922119105042	VISWAA J	10
42	922119105301	AKASH A	14
43	922119105302	BAVADHARANI U	13
44	922119105303	BHARATHKUMAR K	17

FACULTY IN-CHARGE

HOD/EEE

PRINCIPAL



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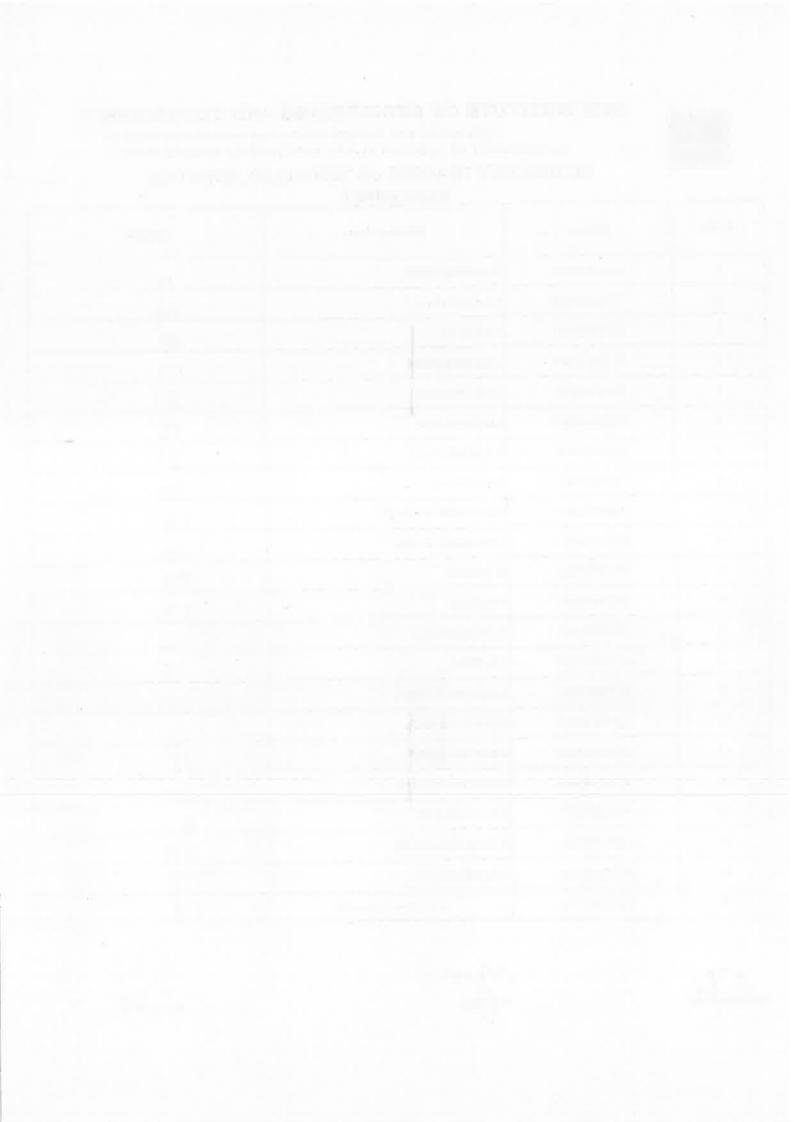
TECHNOLOGY TRAINING ON "INDUSTRIAL ROBOTICS" MARK SHEET

S. No.	Reg.no.	Student Name	MARK
1	922120105001	M.AKASHKUMAR	11
2	922120105002	S.A.AMANULLA	06
3	922120105003	P.M.BALAJI	18
4	922120105005	U.DINESHKUMAR	17
5	922120105006	T.GEETHANJALI	21
6	922120105007	P.JOTHISELVAM	16
7	922120105008	N.KARTHIKEYAN	21
8	922120105009	M.MARIARAJ	20
9	922120105010	S.MOHAMED ABURAR	13
10	9221120105011	S.MOHAMED KASIM	10
11	922120105012	M.MONESH	08
12	922120105013	S.PREETHI	12
13	922120105014	M. PREETHIVIRAJ	11:
14	922120105015	т. понітн	18
15	922120105016	S.SADHAM HUSSAIN	10
16	922120105017	S.SANGARAPANDI	20
17	922120105018	R.SHANMUGAVEL	16
8	922120105019	M.SURIYA PRAKASH	08
9	922120105020	V.TAMILSELVAN	2)
0	922120105021	H. THIRSATH DANIEL	23
1	922120105301	M.HARIPRASATH	08
12	922120105302	R.SHARAN KAILASH	12

Faculty Incharge

Hop/EEE

PRINCIPAL



SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY, DINDIGUL - 624 002

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Dindigul - Palani Highway, Dindigul 624 002

Department of Electrical and Electronics Engineering

TECHNOLOGY TRAINING PROGRAMME ON INDUSTRIAL ROBOTICS

ROBOTICS MULTIPLE CHOICE QUESTION

Name of the student:

Year/Sem:

Date:

- 1. A place where power, information, or a result leaves a system
 - 1. chassis
 - 2. output
 - 3. sensor
 - 4. troubleshooting

Answer: output

- 2. Which of the following describes the use of technology or machinery, specifically involving gases?
 - 1. Pneumatics
 - 2. Hydraulics
 - 3. Actuation
 - 4. Carbonation
- 3. The position or alignment relative to points of the compass or other specific directions.
 - 1. Loops
 - 2. Sensor
 - 3. Chassis
 - 4. Orientation
- 4.A A mechanism having its motive power so concealed that it appears to move spontaneously
 - 1. Automatic
 - 2. Clock Jack
 - 3. Robot
 - 4. Automata
- 5. The the branch of technology that deals with dimensions of microscopic proportion, is known as?
 - 1. Nanny technology
 - 2. Nanotechnology
 - 3. Micro technology
 - 4. Micro machinery
- 6. Which of the following is not an advantage of Robots?
 - 1. They can assist humans with disabilities
 - 2. They can replace jobs
 - 3. They can be used in dangerous environment
 - 4. They don't get tired or require a break

		require extra power to be able to work.
	Sensors	
2.	LEDs	
3.	Motors	
4.	Tri-Color LEDs	
8. The	e branch of technology tha	t deals with the design, construction, operation, and
applic	cation of robots	
	levers	
2.	robotics	
	creative power	
	Science CSF	
9 Wh	en working in a group for	robotics, students should
1	stay on task but don't wor	with other group members
2	Socialize with group men	bers outside of your group and then work alone
2.	Socialize with other group	members and don't help your group
J.	stay on task and work wit	h other group members appropriately
4.	stay off task and work wit	r the body in some invertebrate animals but also robots.
10. A	rigin external covering to	the body in some inverses and
	Exoskeleton	
	Armor	
	Endoskeleton	
4.	Hardware	
1942. 1.		human being or, through inaction, allow a human being to
2	A rebet cent as to school	
3.	. A robot must obey orders	given it by human beings except where such orders would
4.	A robot must protect its of with the First or Second	own existence as long as such protection does not conflict
12 T	How many systems does a	
12.11	A	
2.		
3		
	1. 3	
	Engines and joints belong t	to what system?
1.7. 1.	Digestive system	
	2. Sensory system	
	3. Electric system	
	1. Mechanic system How many types of robots	are there?
	1. 7	are there.
	2. 10	
	3, 6	
4	4. 8	

15.	What are the components of the electric system?
	1. Electric joints and cables
	2. Batteries and electric wiring
	3. Engines and joints
	4. thunder and lightning
16.	How many components does the control system have?
	1. 4
	2. 1
	3. 2
	4. 5
17.	The processor belongs to the
	1. Sensory system
	2. Mechanic system
	3. Electric system
	4. Control system
18.	One of these is NOT a type of robot
	1. Medical
	2. Industrial
	3 Household
	4.Apologetic
19.	The small mobile robot base used in the Robot Educator. This robot is able to perform some but
not a	all of the tasks in the Robotics Engineering
activ	ities
	1. Light sensor
	Lego Mindstorms Education Software
	3. Robot
	4. Robot Educator Model (REM)
20.	A block is the basic unit of programming in the NEVE
	A block is the basic unit of programming in the NXT programming Software. Blocks perform operations in order along the Sequence Beam
titeii	1. Touch Sensor
	 Block (programming) Ports
	4. Behaviors
21	
21.	The primary source of physical motion in the Mindstorms NXT system.
	1. Interactive Servo Motor
	2. Behaviors
	3. Light Sensor
	4. Touch Sensor
22.A	machine that is able to interact with and respond to its environment, characterized by
tı	aree central capabilities: the ability to Sense, the ability to Plan, and the ability to Act
1	. Code
2.	
3.	
4.	Ports
2.	3.The three characteristic capabilities that define a robot
1.	Comment
2.	Sensor
3.	
4.	NXT Brick
, ,	

(49)

24. When working in a group for robotics, students should_____

- 1. Socialize instead of work and then work alone
- 2. Stay on task and don't work with your group
- 3. Work alone and don't socialize with group members
- 4. stay on task and work with group members appropriately

25.General term for any command or group of commands in a program. In the NXT Programming Software, this is one or more blocks_____

- 1. Comment
- 2. Code
- 3. Ports
- 4. Robot

SSM

SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY, DINDIGUL - 624 002

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

Dindigul – Palani Highway, Dindigul 624 002

Department of Electrical and Electronics Engineering

TECHNOLOGY TRAINING PROGRAMME ON INDUSTRIAL ROBOTICS

ROBOTICS MULTIPLE CHOICE QUESTION

Name of the student: ABINAYA

Year/Sem: Date:

A place where power, information, or a result leaves a system

1. chassis

2 output

. sensor

4. troubleshooting

Answer: output

2. Which of the following describes the use of technology or machinery, specifically involving gases?

Pneumatics

Hydraulics

3. Actuation

4. Carbonation

3. The position or alignment relative to points of the compass or other specific directions.

1. Loops

2. Sensor

3. Chassis

Orientation

4.A A mechanism having its motive power so concealed that it appears to move spontaneously

1. Automatic

1. Automatic

2. Clock Jack

3. Robot

4) Automata

5. The the branch of technology that deals with dimensions of microscopic proportion, is known as?

. Nanny technology

2) Nanotechnology

Micro technology

4. Micro machinery

6. Which of the following is not an advantage of Robots?

They can assist humans with disabilities

They can replace jobs

3. They can be used in dangerous environment

4. They don't get tired or require a break

7. The Hummingbird	require extra power to be able to work.
1. Sensors	
2. LEDs	
(3) Motors	
4. Tri-Color LEDs	
8. The branch of technology	that deals with the design, construction, operation, and
application of robots	
levers	
robotics	
3. creative power	
4. Science CSF	
9. When working in a group	for robotics, students should
 stay on task but don't 	work with other group members
Socialize with group r	members outside of your group and then work alone
3 Socialize with other g	roup members and don't help your group
(A) ctay on task and work	with other group members appropriately
10. A rigid external coverin	g for the body in some invertebrate animals but also robots.
1. Exoskeleton	
2/Armor	
Endoskeleton	
4. Hardware	
/	A Alas 2 laws of robotics in
11. The 3rd law of robotics	Spirit Isaac Asimov first announced the 3 laws of robotics in
1942.	
	to the same through inaction allow a human being to
1. A robot may not injui	re a human being or, through inaction, allow a human being to
come to harm	
2. A robot can't go to sc	1001
A robot must obey or	ders given it by human beings except where such orders would
conflict with the Firs	t law
4. A robot must protect	its own existence as long as such protection does not conflict
with the First or Seco	and Law
12. How many systems doe	s a robot nave:
1. 2/	
2./6	
4	
Z(4) 3	1. 4
13. Engines and joints belo	ng to wnat system?
 Digestive system 	
2. Sensory system	
3. Electric system	
Mechanic system	4 41
14 How many types of rob	oots are there?
1. 7	
2. 10	
3./6	
(P) 8	

15 What we the control of the contro	
15. What are the components of the electric	system?
Electric joints and cables	
Batteries and electric wiring	
3. Engines and joints	
4. thunder and lightning	
16. How many components does the control	system have?
1. 4	
2.1	
(169.2	
4. 5	
17. The processor belongs to the	
1. Sensory system	
2. Mechanic system	100 miles
3. Electric system	
4.)Control system	
18. One of these is NOT a type of robot	
1. Medical	
2. Industrial	
3 Household	<i>p</i>
Apologetic	
	obot Educator. This robot is able to perform some but
not all of the tasks in the Robotics Engineering	boot Education. This robot is able to perior in some but
activities	
 Light sensor 	
2. Lego Mindstorms Education Softwar	re de la companya de
3 Robot	
Robot Educator Model (REM)	
20. A block is the basic unit of programming in	the NXT programming Software. Blocks perform
their operations in order along the Sequence Bear	n the TAX1 programming Software. Blocks perform
1. Fouch Sensor	Ц
Block (programming)	
Ports	
4. Behaviors	
21. The primary source of physical motion in t	as Mindatowns NIVII
Interactive Servo Motor	ne viniustorins NAT system.
Behaviors	
3. Light Sensor	
4. Touch Sensor	
three central canabilities: the ability to Ca	respond to its environment, characterized by
1. Code	nse, the ability to Plan, and the ability to Act_
2 Taskbot	
Robots	
4. Ports	
23. The three characteristic capabilities that 1. Comment	at define a robot
2 Sensor	
(3.) Sense-Plan-Act	
4. NXT Brick	

24. When working in a group for robotics, students should

- 1. Socialize instead of work and then work alone
- 2. Stay on task and don't work with your group
 - Work alone and don't socialize with group members stay on task and work with group members appropriately

25.General term for any command or group of commands in a program. In the NXT Programming Software, this is one or more blocks_____

Comment

Code

Ports

4. Robot

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Department of Electrical and Electronics Engineering

TECHNOLOGY TRAINING PROGRAMME ON INDUSTRIAL ROBOTICS



ROBOTICS MULTIPLE CHOICE QUESTION

Name of the student: H. Thrishood Daniel

Year/Sem: 111

Date: 11/03/2022

place where power, information, or a result leaves a system

- 1./chassis
- Output
- 3. sensor
- 4. troubleshooting

Answer: output

- 2. Which of the following describes the use of technology or machinery, specifically involving gases?
 - (I) Pneumatics
 - Hydraulics
 - 3. Actuation
 - 4. Carbonation
- 3. The position or alignment relative to points of the compass or other specific directions.
 - 1. Loops
 - 2 Sensor
 - 3. Chassis
 - Orientation
- 4.A A mechanism having its motive power so concealed that it appears to move spontaneously
 - 1. Automatic
 - 2. Clock Jack
 - 3. Robot
 - Automata
- 5. The the branch of technology that deals with dimensions of microscopic proportion, is known as?
 - 1. Nanny technology
 - Nanotechnology
 - 3. Micro technology
 - 4. Micro machinery
- 6. Which of the following is not an advantage of Robots?
 - 1. They can assist humans with disabilities
 - They can replace jobs
 - 3. They can be used in dangerous environment
 - 4. They don't get tired or require a break

7. The Hummingbird	require extra power to be able to work.
1. Sensors	
2./LEDs	
Motors	
4. Tri-Color LEDs	
8. The branch of technology tha	at deals with the design, construction, operation, and
application of robots	<u> </u>
1. levers	
robotics	
creative power	
4. Science CSF	
9 When working in a group fo	r robotics, students should
1 otay on task but don't wor	rk with other group members
V Socialize with group mer	mbers outside of your group and then work alone
3 Socialize with other grou	p members and don't help your group
A distribution of and avorte said	th other group members appropriately
10 A ridid external covering for	or the body in some invertebrate animals but also robots.
1 Exoskeleton	
Armor	
Endoskeleton	
4. Hardware	
1942. 1. A robot may not injure a come to harm A robot can't go to school A robot must obey order	w own existence as long as such protection does not conflict
13. Engines and joints belong 1. Digestive system	to what system?
2. Sensory system	
2. Sensory system 3. Electric system	
Mechanic system14. How many types of robots	s are there?
	s are there.
1. 7 2. 10 3) 6 4. 8	

15.	What are the components of the electric system?
	Electric joints and cables
(Batteries and electric wiring
W.	3. Engines and joints
	4. thunder and lightning
16.	How many components does the control system have?
N	1. 4
	2. 1
1	3) 2
	4. 5
17.	The processor belongs to the
	1 Sensory system
	2. Mechanic system
/	3. Electric system
-	4 Control system
18.	One of these is NOT a type of robot
	1. Medical
	2. Industrial
	3-Household
1	4.Apologetic
19.	The small mobile robot base used in the Robot Educator. This robot is able to perform some bu
not a	ill of the tasks in the Robotics Engineering
activ	ities
	1. Light sensor
	2/ Lego Mindstorms Education Software
	/3. Robot
1	Robot Educator Model (REM)
20.	A block is the basic unit of programming in the NXT programming Software. Blocks perform
their	operations in order along the Sequence Beam
	1. Touch Sensor
	Block (programming)
/	3. Ports
	4. Behaviors
21.	The primary source of physical motion in the Mindstorms NXT system.
	1 Interactive Servo Motor
	2. Behaviors
	3. Light Sensor
0	4. Touch Sensor
22.A	machine that is able to interact with and respond to its environment, characterized by
th	iree central capabilities: the ability to Sense, the ability to Plan, and the ability to Act_
-1,	Code Code
12.	Taskbot
13.	Robots
4.	Ports
23	The three characteristic capabilities that define a robot
X.	Comment
120	Sensor
(3)	Sense-Plan-Act
4.	NXT Brick

24. When working in a group for robotics, students should 1. Socialize instead of work and then work alone

2. Stay on task and don't work with your group

Work alone and don't socialize with group members
stay on task and work with group members appropriately

25.General term for any command or group of commands in a program. In the NXT Programming Software, this is one or more blocks_____

Comment

Code

3. Ports

4. Robot



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Department of Electrical and Electronics Engineering

TECHNOLOGY TRAINING PROGRAMME ON INDUSTRIAL ROBOTICS



ROBOTICS MULTIPLE CHOICE QUESTION

Name of the student: & MOLIAMED ABURAR
Year/Sem: 111

Date: 17-03-23

1. A place where power, information, or a result leaves a system

- 1. chassis
- Ø output
- 3. sensor
- 4. troubleshooting

Answer: output

2. Which of the following describes the use of technology or machinery, specifically involving gases?

- Pneumatics
- 2. Hydraulics
- 3) Actuation
- Carbonation

3. The position or alignment relative to points of the compass or other specific directions.

- 1. Loops
 - Sensor
 - 3. Chassis
 - 4. Orientation

4.A A mechanism having its motive power so concealed that it appears to move spontaneously

- 1. Automatic
- Clock Jack
- 3. Robot
- 4) Automata

5. The the branch of technology that deals with dimensions of microscopic proportion, is known as?

- Nanny technology
 - 2. Nanotechnology
 - 3. Micro technology
 - 4. Micro machinery

6. Which of the following is not an advantage of Robots?

- 1. They can assist humans with disabilities
- They can replace jobs
- 3. They can be used in dangerous environment
- 4. They don't get tired or require a break

^	N. The	Hummingbird _	require extra power to be able to work.	
	O	Sensors		
	12.	LEDs		
	3.	Motors		
	4.	Tri-Color LEDs	and and	
			ology that deals with the design, construction, operation, and	
	applic	ation of robots		
	X	levers		
	10	robotics		
/		creative power Science CSF		
			group for robotics, students should	
	9. WIL	stay on task but	don't work with other group members	
1	10	Socialize with or	oup members outside of your group and then work alone	
1	3.	Socialize with of	ther group members and don't help your group	
- 1	1	etay on task and	work with other group members appropriately	
C	10 A	rigid external cov	vering for the body in some invertebrate animals but also robots.	
	1	Exoskeleton		
1	2.	Armor		
	3.	Endoskeleton		
1	4.	Hardware		
	1942.		otics Spirit Isaac Asimov first announced the 3 laws of robotics in	
	1.	A robot may not	injure a human being or, through inaction, allow a human being to	
	/	come to harm	411	
	16	A robot can't go	bey orders given it by human beings except where such orders would	
	/ 0	conflict with the	Firet law	
/	4	A robot must pr	otect its own existence as long as such protection does not conflict	
	7.	with the First or	Second Law	
	12. H		s does a robot have?	
1	2.	6		
A	3.	4		
	4.	3		r
	13. E		s belong to what system?	
	T C	Digestive system	m — — — — — — — — — — — — — — — — — — —	
1	2.	Sensory system		
	3.	Electric system		
	4.		of robots are there?	
	14. H		of lobots are there.	
-	1 6	. 7		
	13	, 6		
	4			
	7	. 0		

. 6				
	15.	What	are the components of the electric system?	
)	1. Ele	lectric joints and cables	
V		Ba	atteries and electric wiring	
		3. En	ngines and joints	
1	10	🖺 thi	under and lightning	
	16.	How r	many components does the control system have?	
	X	1 4	1	
/		2. 1		
		3. 2		
	4	4. 5		
	17.	The	e processor belongs to the	
			ensory system	
			Mechanic system	
	,		electric system	
C	/		Control system	
1	18.		e of these is NOT a type of robot	
		1 M	ledical	
			ndustrial	
			ousehold	
<	/		pologetic	
1	9.			
		II of th	small mobile robot base used in the Robot Educator. This rob the tasks in the Robotics Engineering	ot is able to perform some but
9	ctivi	ities	ic tasks in the Robotics Engineering	
4	CUVI	1.	1 Light sensor	
		2/		
		12	Lego Mindstorms Education Software Robot	
0	/,	(A)	·	
2	0.	4	Robot Educator Model (REM)	
		A DIC	ock is the basic unit of programming in the NXT programming	g Software. Blocks perform
u	ieir	operat	uens in order along the Sequence Beam	
		-	Touch Sensor	
	/	(2)	Block (programming)	
-		5.	Ports	
	_	4.	Behaviors	
2.	1.	The	primary source of physical motion in the Mindstorms NXT sys	stem.
h. 1	n.	1.0	Interactive Servo Motor	
V		2.	Behaviors	
		3	Light Sensor	
1		4.	Touch Sensor	
- 2	2.A	machi	ine that is able to interact with and respond to its enviro	nment, characterized by
	th	ree ge	entral capabilities: the ability to Sense, the ability to Plan	, and the ability to Act
	1.	Lyde	C .	,
	3/	Task		
1	B	Robo		
		Ports		
	23	.The t	three characteristic capabilities that define a robot	
1	1.	Com	nment	e di
	2.	Sens	sor	
1	3.	Sens	se-Plan-Act	
1	4		Γ Brick	
	1	CONTRACTOR OF STREET	SNITSTITET 2	

Stay on task and don't work with your group
 Work alone and don't socialize with group members
 stay on task and work with group members appropriately

25. General term for any command or group of commands in a program. In the NXT Programming Software, this is one or more blocks_____

Comment Code

3. Ports

4. Robot



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Department of Electrical and Electronics Engineering

TECHNOLOGY TRAINING PROGRAMME ON INDUSTRIAL ROBOTICS



ROBOTICS MULTIPLE CHOICE QUESTION

Name of the student: Hasini M

Year/Sem: 🕟

Date: 11-03-23

1. A place where power	, information,	or a result	leaves a system
------------------------	----------------	-------------	-----------------

- l. chassis
- Output
- 3. sensor
- 4. troubleshooting

Answer; output

- 2. Which of the following describes the use of technology or machinery, specifically involving gases?
 - Pneumatics
 - 2. Hydraulics
 - 3. Actuation
 - 4. Carbonation

3. The position or alignment relative to points of the compass or other specific directions.

- 1. Loops
- 2. Sensor
- 3. Chassis
- (4) Orientation

4.A A mechanism having its motive power so concealed that it appears to move spontaneously

- 1. Automatic
- 2. Clock Jack
- 3. Robot
- (4) Automata

5. The the branch of technology that deals with dimensions of microscopic proportion, is known as?

- 1. Nanny technology
- 2 Nanotechnology
- Micro technology
- 4. Micro machinery

6. Which of the following is not an advantage of Robots?

- 1. They can assist humans with disabilities
- 2. They can replace jobs
- 3. They can be used in dangerous environment
- 4.) They don't get tired or require a break

24.	When working in a group for robotics, students should	
	Socialize instead of work and then work alone Stay on task and don't work with your group	

3. Work alone and don't socialize with group members

(4) stay on task and work with group members appropriately

25.General term for any command or group of commands in a program. In the NXT Programming Software, this is one or more blocks_____

1. Comment Code 3. Ports 4. Robot



Department of Electrical and Electronics Engineering

STUDENT FEEDBACK FORM

Name of the Student:	Greethanjali.	. T
----------------------	---------------	-----

Year/Sem:

2023 / VI

Date:

11. 3.23

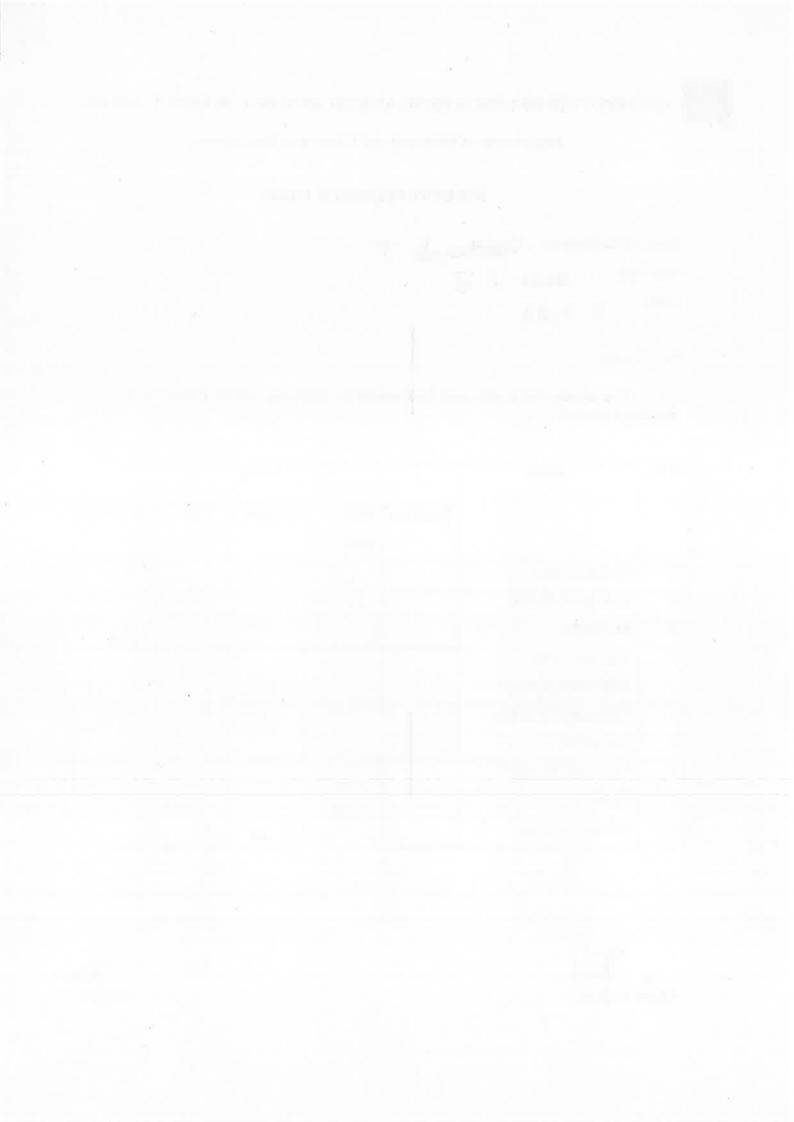
Dear Student,

You are required to give your feedback on the following aspects. Please tick in the respective column.

S.No	Criteria	Rating				
		Excellent	Very good	Good	Fair	Satisfactory
1	Course content					
2	Skill development		V			
3	Motivation			~		
4	Regularity and punctuality of trainer					
5	Coverage of syllabus			V		
6	Interaction		~			
7	Individual attention					
8	Outcome					
9	Other suggestions			Vest.		

Faculty incharge

HoDEEE





Department of Electrical and Electronics Engineering

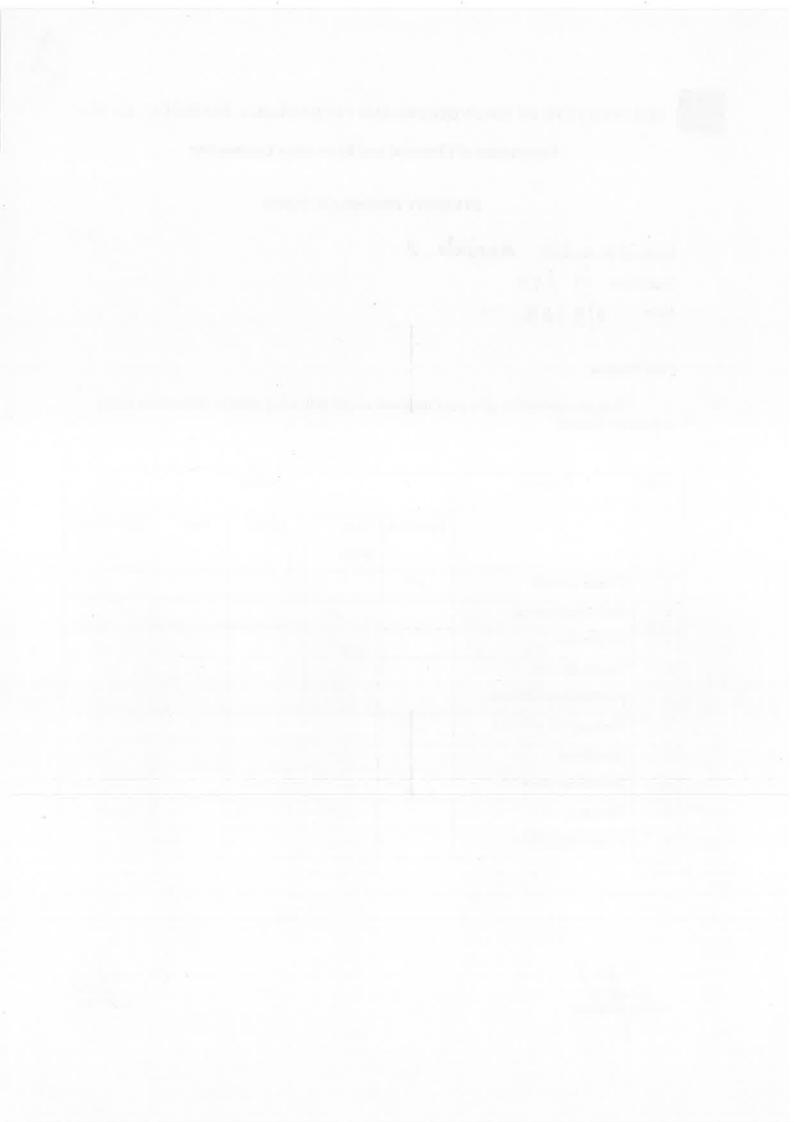
STUDENT FEEDBACK FORM

Name of the Student: Manjula. 9
Year/Sem: 17 / VII
Date: 11/3/03

Dear Student,

You are required to give your feedback on the following aspects. Please tick in the respective column.

S.No	Criteria	Rating				
		Excellent	Very	Good	Fair	Satisfactory
1	Course content	1				
2	Skill development					
3	Motivation					
4	Regularity and punctuality of trainer					
5	Coverage of syllabus	1				
6	Interaction		~			
7	Individual attention	1				
8	Outcome		1			
9	Other suggestions		_			





Department of Electrical and Electronics Engineering

STUDENT FEEDBACK FORM

Name of the Student: R. MUTHUKUMAR

Year/Sem: W VII

Date: 11/03/2-3

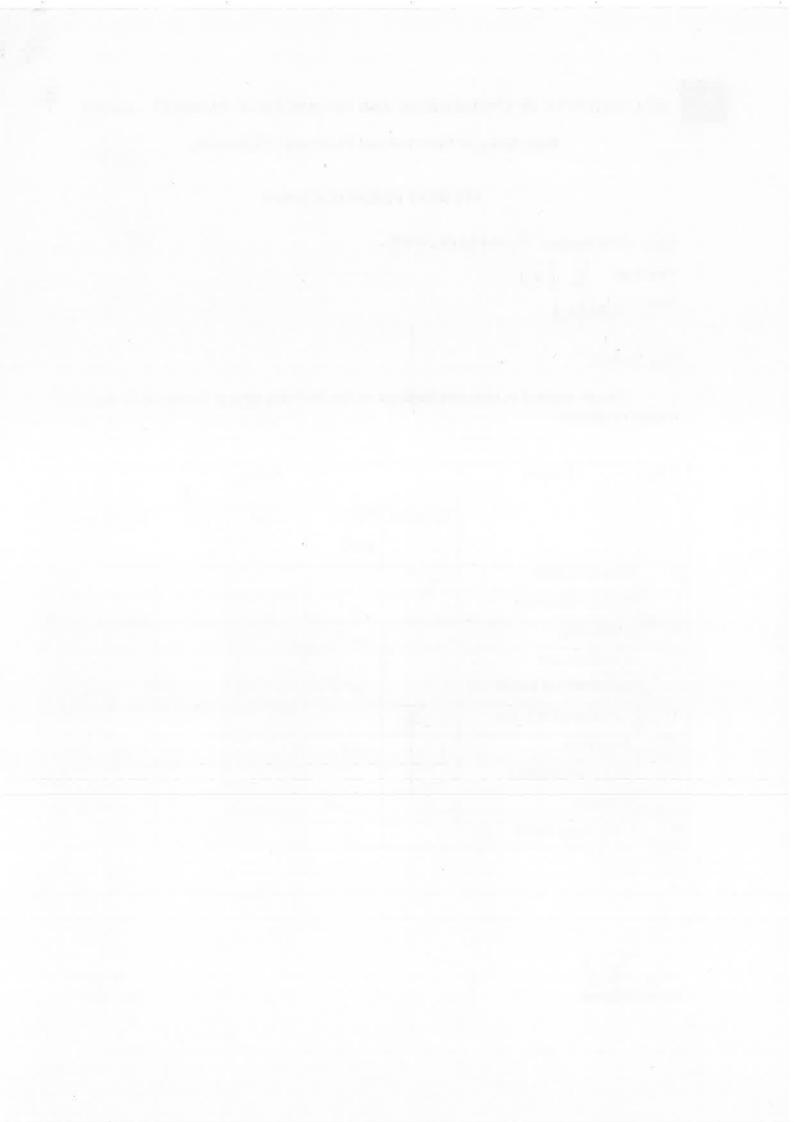
Dear Student,

You are required to give your feedback on the following aspects. Please tick in the respective column.

S.No	Criteria	-	- Rating				
		Excellent	Very	Good	Fair	Satisfactory	
1	Course content	1					
2	Skill development		1				
3	Motivation		1				
4	Regularity and punctuality of trainer		1				
5	Coverage of syllabus	1					
6	Interaction		1				
7	Individual attention	1					
8	Outcome		1				
9	Other suggestions	200 200 200					

Faculty in harge

HoD/VEE









AGIIT/22-23/CTRG/1498

CERTIFICATE OF PARTICIPATION

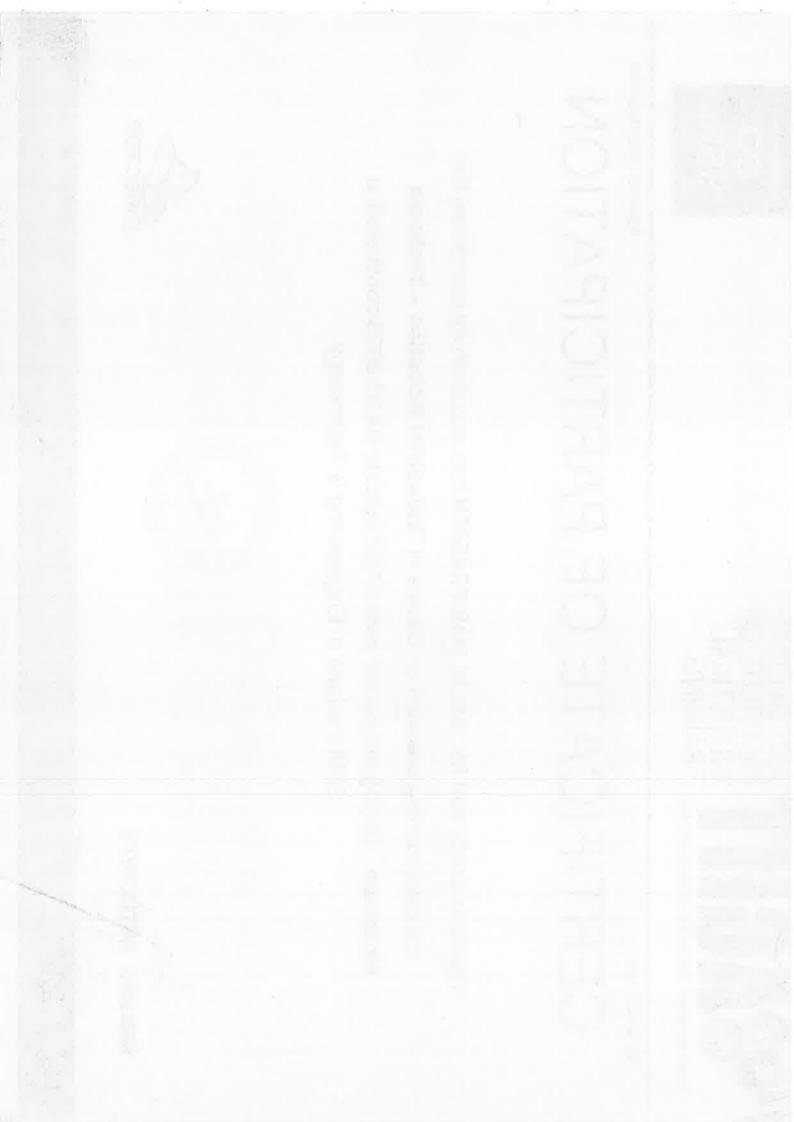
This is to certify that Mr. /Ms M.HARIPRASATH has successfully completed the

six days training program on Basics of "Industrial Robotics - Yaskawa

Motoman". During the period from 27.02.2023 to 04.03.2023 conducted at SSM Institute of Engineering & Technology













REG. NO. 1184

AGIIT/22-23/CTRG/1494

CERTIFICATE OF PARTICIPATION

This is to certify that Mr. /Ms M.SURIYA PRAKASH has successfully completed the

six days training program on Basics of "Industrial Robotics - Yaskawa

Motoman". During the period from 27.02.2023 to 04.03.2023 conducted at SSM Institute of Engineering & Technology

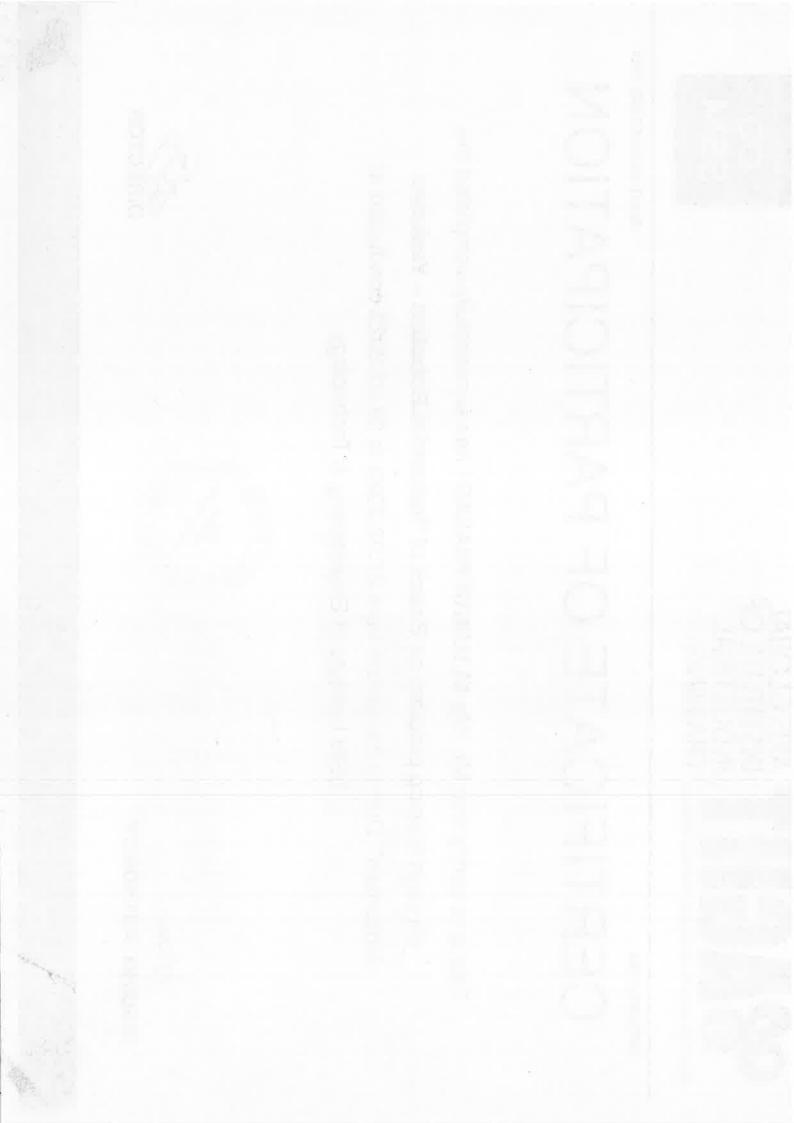






IRECTOR

1809001









REG.NO.1184

AGIIT/22-23/CTRG/1489

CERTIFICATE OF PARTICIPATION

This is to certify that Mr. /Ms M. PREETHIVIRAJ has successfully completed the

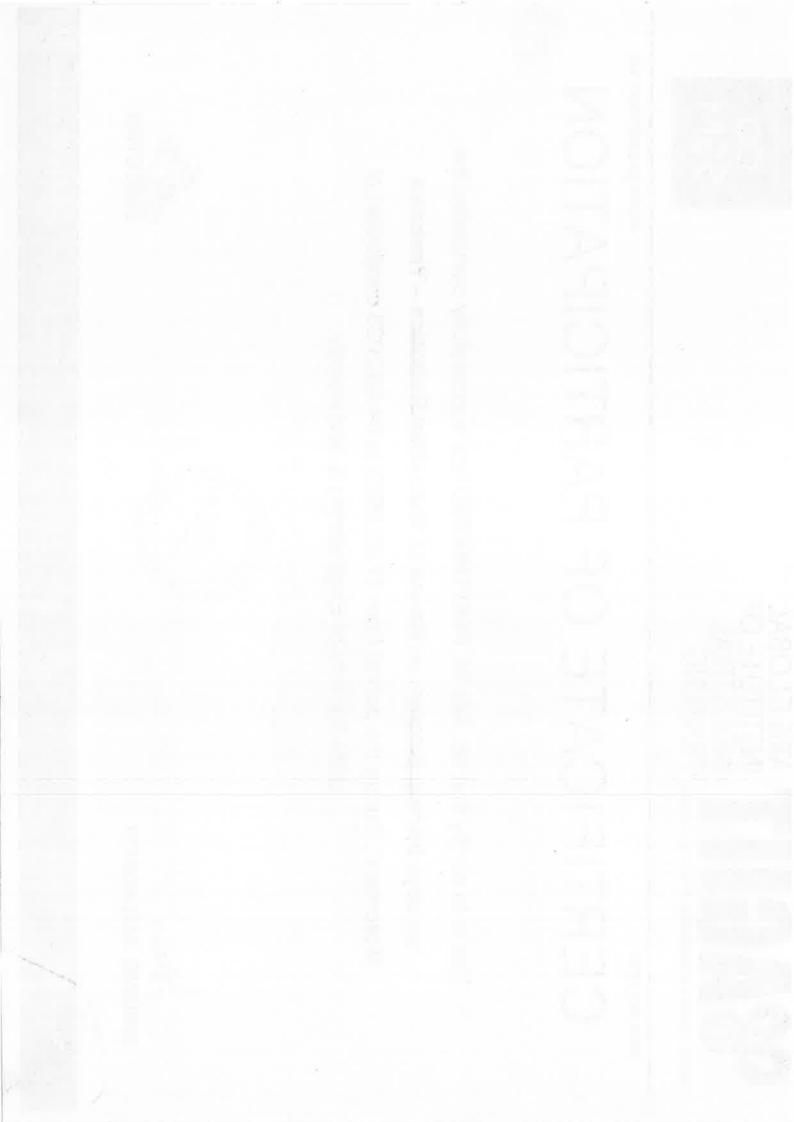
six days training program on Basics of "Industrial Robotics - Yaskawa

Motoman". During the period from 27.02.2023 to 04.03.2023 conducted at SSM Institute of Engineering & Technology















REG.NO.1184

AGIIT/22-23/CTRG/1493

CERTIFICATE OF PARTICIPATION

This is to certify that Mr. /Ms R.SHANMUGAVEL has successfully completed the

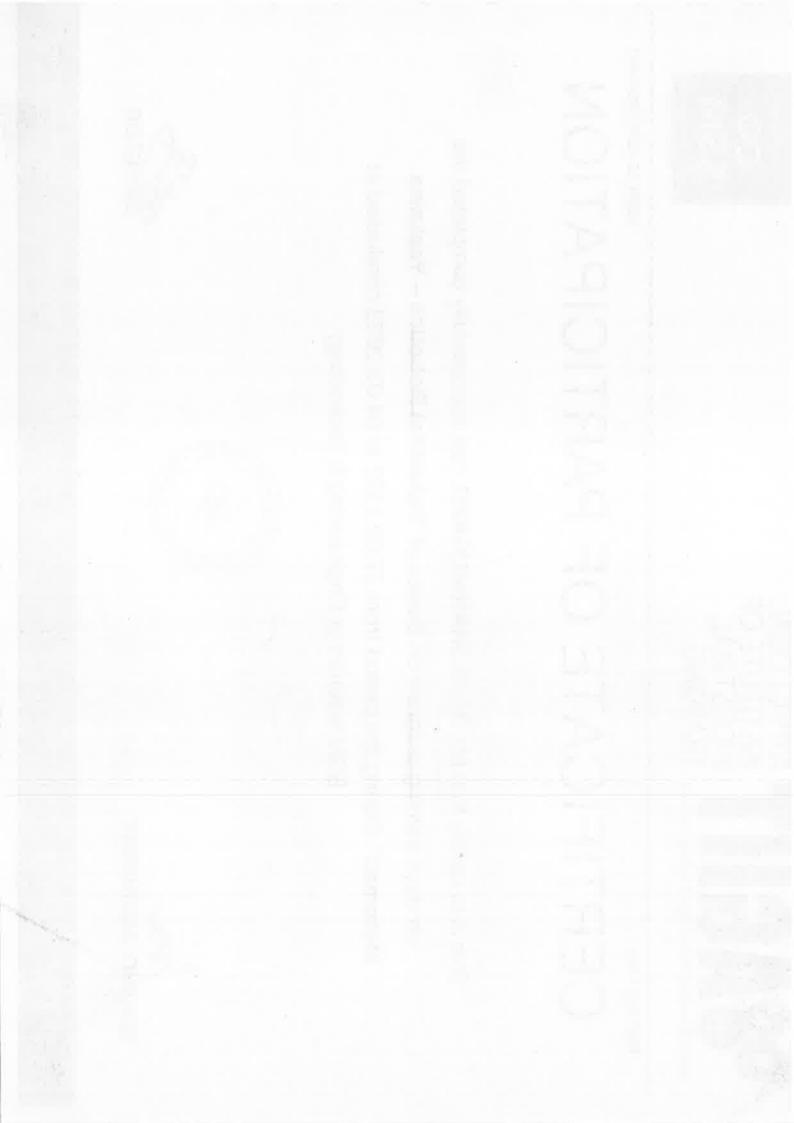
six days training program on Basics of "Industrial Robotics - Yaskawa

Motoman". During the period from 27.02.2023 to 04.03.2023 conducted at SSM Institute of Engineering & Technology















AGIIT/22-23/CTRG/1492

CERTIFICATE OF PARTICIPATION

This is to certify that Mr. /Ms S.SANGARAPANDI has successfully completed the

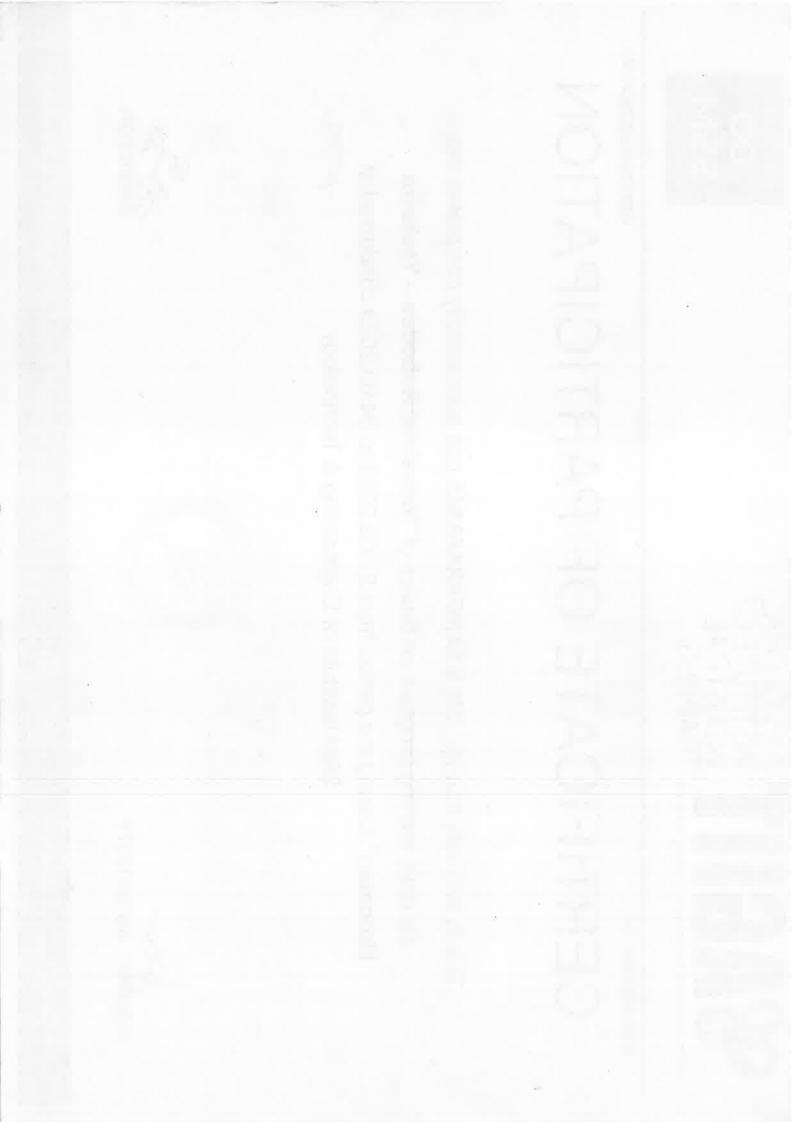
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Dindigul – Palani Highway, Dindigul 624 002

Department of Electrical and Electronics Engineering

TECHNOLOGY TRAINING PROGRAMME ON INDUSTRIAL ROBOTICS



ROBOTICS MULTIPLE CHOICE QUESTION

Name of the student: Havini M

Year/Sem: 🔯

Date: 11-03-23

1. A place where power	, information,	or a result leaves a sy	ystem
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- l. chassis
- 23 output
- 3. sensor
- 4. troubleshooting

Answer: output

- 2. Which of the following describes the use of technology or machinery, specifically involving gases?
 - (I) Pneumatics
 - 2. Hydraulics
 - 3. Actuation
 - 4. Carbonation
- 3. The position or alignment relative to points of the compass or other specific directions.
 - 1. Loops
 - 2. Sensor
 - 3. Chassis
 - (4) Orientation
- 4.A A mechanism having its motive power so concealed that it appears to move spontaneously
 - 1. Automatic
 - Clock Jack
 - 3. Robot
 - (4) Automata
- 5. The the branch of technology that deals with dimensions of microscopic proportion, is known as?
 - 1. Nanny technology
 - 2 Nanotechnology
 - Micro technology
 - 4. Micro machinery
- 6. Which of the following is not an advantage of Robots?
 - 1. They can assist humans with disabilities
 - 2. They can replace jobs
 - 3. They can be used in dangerous environment
 - (4) They don't get tired or require a break

7. The	Hummingbird	require extra power to be able to work.
1.	Sensors	
2.	LEDs	
(3)	Motors	
	Tri-Color LEDs	
		leals with the design, construction, operation, and
	cation of robots	
	A DESCRIPTION OF THE PROPERTY	
	robotics	
3.	creative power	
	Science CSF	7 4 1 4 1 4 1
9. Wh	en working in a group for r	obotics, students snould
1.	stay on task but don't work v	with other group members
2/.	Socialize with group member	ers outside of your group and then work alone
/3.	Socialize with other group n	nembers and don't help your group
(4)	stay on task and work with o	other group members appropriately
10. A	rigid external covering for t	he body in some invertebrate animals but also robots.
	Exoskeleton	
2.	Armor	
(3)	Endoskeleton	
4.	Hardware	
11.Th	e 3rd law of robotics Spirit	Isaac Asimov first announced the 3 laws of robotics in
1942.		
1.	A robot may not injure a hu	man being or, through inaction, allow a human being to
	come to harm	
6	A robot can't go to school	
13	A robot must obey orders g	ven it by human beings except where such orders would
1	conflict with the First law	3
4		n existence as long as such protection does not conflict
٠.	with the First or Second Lav	
12 H	ow many systems does a rob	
12.11	ow many systems does a roc	ot have.
2/	6	
/2	4	
/ 6		
4) 3	what avatam?
13. E.	ngines and joints belong to v Digestive system	what system:
2.		
1/2	Sensory system	
/ 3.	Electric system	
	-	41 0
14. H	low many types of robots are	e there?
1)		
2.	. 10	
/3.	. 6	
$\sqrt{4}$	1 8	

15	. What are the components of the electric system?
	1. Efectric joints and cables
	Batteries and electric wiring
	3. Engines and joints
/	4. thunder and lightning
. 16	. How many components does the control system have?
X	1. 4
	2. 1
U	(3) 2
	1 5
17.	The successive Laborator of
1/.	
	1. Sensory system
	2. Mechanic system
	3. Electric system
1	4 Control system
18.	One of these is NOT a type of robot
	1. Medical
	2. Industrial
	3 Household
	A.Apologetic
19.	The small mobile robot base used in the Robot Educator. This robot is able to perform some but
not	all of the tasks in the Robotics Engineering
act	ivities
	1. Dight sensor
	Lego Mindstorms Education Software
11	3. Robot
	Robot Educator Model (REM)
20.	A block is the basic unit of programming in the NXT programming Software. Blocks perform
the	ir operations in order along the Sequence Beam
	1. Touch Sensor
	2.) Block (programming)
/	3. Ports
0	4. Behaviors
21.	The primary source of physical motion in the Mindstorms NXT system.
	Interactive Servo Motor
	2. Behaviors
	3. Light Sensor
	4. Touch Sensor
22	
22.	A machine that is able to interact with and respond to its environment. characterized by
	three central capabilities: the ability to Sense, the ability to Plan, and the ability to Act_
	1. Code
	2. Taskbot
	3 Robots
./	4. Ports
	23.The three characteristic capabilities that define a robot
	1. Comment /
	2. Sensor
(Sense-Plan-Act
)	4. NXT Brick

24. When working in a group for robotics, students should		
1_{ϵ}	Socialize instead of work and then work alone	
2.		
3.	Work alone and don't socialize with group members	
4	Work alone and don't socialize with group members stay on task and work with group members appropriately	

25.General term for any command or group of commands in a program. In the NXT Programming Software, this is one or more blocks_____

1. Comment 2 Code 3. Ports 4. Robot