

(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

# Robot Operating Systems (ROS)

05.01.2023 to 10.01.2023 (5 days)

VAC Coordinator

HoD/MTRE



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

## Department of Mechatronics Engineering

0.11	Contant absoluted	Document
S.No.	Content checklist	
1	Academic Year	2022-23 Even
2	Regulation	KCET R2021
3	Department Name	Mechatronics Engineering
4	Name of the Value-added course	Robot Operating System (ROS)
5	No. of Credits	2
6	Category:	Hands-on &Skill based
	Theory/Lab/Hands-on/Skill	A 44
	based etc	
7	Name and Details of the	RobotoAI Technologies, Coimbatore
	Joint-organization	**
	(industry/NGO etc) if any	
8	Resource person details	Mr.S.Rubesh Thirumani, Co-founder,
		RobotoAI Technologies, COimbatore
9	Three Member Committee	Dr.K.Kannan HoD/MTRE
	details	S. Wesley Moses Samdoss & S. David
		Blessley AP/MTRE
10	VAC Coordinator Details	S.David Blessley AP/MTRE
11	Duration (30 h mandatory)	35 hours
12	Period (From-To)	05.01.2023 to 10.01.2023
13	Venue	SMC Lab/Mechatronics

VAC Coordinator

HoD/MTRE

Dean (Academic Courses)

# COLLEGE OF ENGINEERING & TECHNOLOGY S.P.G.Chidambara Nadar & Nagammal Computer S.P.G.Chidambara & Nadar & Nagammal Computer S.P.G.Chidambara & Nadar &

S.P.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.

SL No.

D. A

MTRE

Date ... 17.12.2022

1) Name of the object / item / service

 Purpose (Replacement / upgradation / New) : or (Participation / Presentation) or (Service / Renewal / New)

3) Specifications

Approx. Value per object / item (Min. Quote / Reasons for Higher Quote)

5) No. of Quotations Received

No. / Type of objects / items / service needed

7) Total Value (incl. tax)

Signature of Faculty

Requesting Permission to

Conduct 5 days value Added

course on "ROS (Robot

operating System)" for I year. Mechahronics Engineering students.

Date: 05.01.2023 - 07.01.2023 and 09.01.2023 - 10.01.2023

2 Experts from RobotoAI Technologies,

: 59,000/- (Quotation Enclosed) + Tea, food and accomodation

Value Added Com

A. de 17/10/22

PODY CIPAL

## OFFICE USE

1) Budget allotted

2) Amount committed / Spent sofar

3) Balance available

OM

TREE SURVEY

Secretary

## Invoice

Invoice No# INV22-23/08

Invoice Date January 10, 2023

Workshop - ROS - 30 Hrs (Robot Operating System) Description



## Billed By

#### **RobotoAl Technologies**

No. 466, G V RESIDENCY, SOWRIPALAYAM (PO),

Coimbatore,

Tamil Nadu, India - 641028 **GSTIN: 33ABBFR6328J1Z5** 

PAN: ABBFR6328J

Email: admin@robotoai.com

## Billed To

## Kamaraj College of Engineering and Technology

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

Virudhunagar, Madurai District.,

Madurai,

Tamil Nadu, India - 625 701

GSTIN: -

PA	N	:	-

	ltem	GST Rate	Rate	Quantity	Amount	CGST 9%	SGST	Total
١.	Workshop-ROS-30 Hrs	18%	₹50,000	1	₹50,000	₹4,500	₹4,500	₹59,000
	I ('ada) - FIFTY NIME THOUS	ND BUREECO	NII V	Amo	unt			₹50,000
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ota	i (in words): FIFTY NINE THOUS?	AND RUPEES OF	NLY	SGST				₹4,500
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**Bank Details** 

**Account Name** 

**ROBOTOAI TECHNOLOGIES** 

Account Number

39887155140

**IFSC** 

SBIN0007231

**Account Type** Bank

Current

State Bank of India

**ROBOTOAI TECHNOLOGIES** 

No.466, G V Residency, Masakalipalayam, Sowripalayam (Post),

Authorised Signatory

For any enquiry, reach out via email at admin@robotoai.com, call on +91 76398 08033



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## DEPARTMENT OF MECHATRONICS ENGINEERING **CIRCULAR**

02.01.2023

The Department of Mechatronics Engineering is organizing Value added course on "Robot Operating System (ROS)" for II-year Mechatronics Engineering Students. The details of the program are as follows:

Date

: 05.01.2023 to 07.01.2023, 09.01.2023 & 10.01.2023

Resource Institute : RobotoAI Technologies, Coimbatore

**Topic** 

: Value Added Course on "ROS"

Relevance to PO

: PO1, PO5, PO9

Relevance to PSO

: PSO1

**Event Outcome** 

: This program enables the students to learn basics of ROS and to

create, build and run ROS programs for various robot applications

Hence all II-year Mechatronics students are instructed to attend the program without fail.

VAC Coordinator

02 0 2023

#### Copy to

- 1. Department Main Notice Board& Circular File
- 2. To be read in II Year Class Room.
- 3. To all II MTRE students through their official mail Id
- 4. All MTRE faculty through their official mail Id
- 5. IQAC



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## Value Added Course on Robot Operating System (ROS)

## **Syllabus**

Introduction to ROS Framework and Prerequisites (7)
Installation, Setting up the system and validation - Importance of ROS - Why
ROS - Understanding communication in ROS (Final system level and Graph level)

## ROS Ecosystem (7)

Getting started with ROS Programming, communication - ROS nodes, topics, messages - ROS Services

## ROS Tools and Utilities (Mobile robot) (7)

URDF - Build robot using URDF and Visualize in RViz - Basic motions in ROS ROS Tools and Utilities (Manipulator) - Modelling and visualizing robots (Practical) - Solidworks to URDF

## Robot Modelling (7)

Students will model their own mobile robot, Modelling the environment, Students will make their own custom environment and make it ready for the robot simulation

## **Robot Tele-Operation (7)**

ROS Gazebo full simulation

#### Outcome

This program enables the students to learn basics of ROS and to create, build and run ROS program for various robot applications



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## DEPARTMENT OF MECHATRONICS ENGINEERING Minutes of Meeting-BoS -19<sup>th</sup> March, 2022

# OPEN ELECTIVE COURSES (Offered by Mechatronics Engineering Department to other branches)

### Semester V

SI. No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C	Offering To
1.	OMT151	Low Cost Automation	OE	3	3	0	0	3	ECE, EEE, EIE, MECH

#### Semester VII

SI. No.	Course Code	Course Title	Category	Contact Periods	L	Т	P	C	Offering To
1.	OMT171	Industrial Robotics	OE	3	3	0	0	3	AI & DS, CSE, ECE EEE EIE

## The following suggestions were given by the BOS Members:

- Dr. T. Asokan & Dr.V.Santhanam suggested that in Professional Elective –IV the subject name Autonomous and Mobile Robot title is inappropriate and they given suggestions as Autonomous Mobile Robot.
- In Professional Elective-IV the members asked about the resources and research facilities
  available for the subject Synthesis and Characterization of Nano Materials. Dr.K.Kannan
  described the resources and research facilities available for that subject in other
  departments.



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## DEPARTMENT OF MECHATRONICS ENGINEERING Minutes of Meeting-BoS -19<sup>th</sup> March, 2022

- Dr. N. Selvaraj suggested to rename the subject titled Principles of Management as Management Science and to follow the recent (after 2010 is recommended) editions of Text and Reference books.
- Members recommended the text book CAD/CAM by Mikell P.Groover and the reference book CAD/CAM by P.N.Rao for the subject Computed Aided Design and Manufacturing.
- Robotics and Machine Vision System the Members suggested harmonic drives topic is not fit for included in Unit-I. Dr.K.Kannan replied will add the topic of Introduction to Transmission & Drives. Unit III topics are very minimal. They asked to reframe the syllabus for this subject.
- Dr.T.Asokan Suggested that CAD/CAM Lab Experiment Number 2 can be renamed as Modeling and Assembling of Mechanical Systems.
- Dr. N. Selvaraj clarified about the Robot Operating Systems. Dr.V.Santhanam mentioned
  the ROS is not discussed in theory, so the members suggested that the provisions may
  given for the introduction to ROS in Lab Syllabus.
- Dr. N. Selvaraj suggested to ensure the Six-sigma topic in Total Quality Management.
  - Dr.T.Askokan suggested to remove the repeated topics in Automation System Design.
- Dr. K. Kannan presented the Proposed Syllabus for open elective papers. Members suggested to revise the syllabus for industrial robotics.

#### **BOS 004.04**

**Dr. K. Kannan** presented the details of Value Added Course Conducted for II Year Mechatronics Engineering students.



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## DEPARTMENT OF MECHATRONICS ENGINEERING Minutes of Meeting-BoS -19<sup>th</sup> March, 2022

Name of the Course	:Real Time applications and Developments using LabVIEW
Course Duration	: 6 days
Conducted dates	: 23.02.2022-25.02.2022, 28.02.2022, 01.03.2022, 02.03.2022
No. of Students attended	: 16 students from Mechatronics Engineering
Name of the External Institute	: Aadhyaa Skills Research and Development, Chennai

#### **BOS 004.05**

Dr. K. Kannan presented the details of Audit Course offered MTRE students

#### III Semester

Name of the Audit Course

: Constitution of India

Course Duration

: 45 Hours

#### **IV Semester**

Name of the Audit Course

: Design Thinking

Course Duration

: 45 Hours

#### **BOS 004.06**

Dr. K. Kannan presented the List of Recommended NPTEL Courses to enroll by our students during VI & VII Semester under R2020.

#### For Even Semester:

- Basics of Biology
- Computer Networks and Internet Protocol
- · Block Chain and its applications'



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## DEPARTMENT OF MECHATRONICS ENGINEERING Minutes of Meeting-BoS -19<sup>th</sup> March, 2022

- E-Business
- Six Sigma
- · Principles of Industrial Engineering
- Product design and Manufacturing

#### For Odd Semester:

- Introduction to Industry 4.0 and Industrial Internet of Things
- Computer Vision
- · Renewable Energy
- · Industrial safety Engineering
- · Operations and Supply chain management
- Work system Management
- · Engineering Metrology

### **BOS 004.07**

• Dr. K. Kannan presented the List of Open Elective Courses to be offered to other departments.

#### V Semester

Name of the Open Elective Course

: Low Cost Automation

Course Duration and Credit

: 45 Hours & 3 Credits

Will be offered to

: ECE, EEE, EIE and Mech

#### VII Semester

Name of the Audit Course

: Industrial Robotics

Course Duration and Credit

: 45 Hours & 3 Credits

Will be offered to

: AI&DS, CSE, IT, ECE, EEE and EIE



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## DEPARTMENT OF MECHATRONICS ENGINEERING Minutes of Meeting-BoS -19<sup>th</sup> March, 2022

#### **BOS 004.08**

Dr. K. Kannan presented the conduct of Integrated Theory Cum Practical Courses - R2020

## For Integrated Theory Cum Practical Courses - R2020

•	Total Marks (100) Comprises of Internal (40) and External (60)
•	Internal Mark for Theory(20) is based on the three cycle test
•	Internal Mark for Practical (20) is based on End Semester Practical Examinations

#### BOS 004.09

**Dr. K. Kannan** presented the curriculum Framework for B.E Mechatronics Engineering R2021

Sl. No.	Category of Courses	Credits
1.	Foundation Courses	60 Credits
2.	Professional Core (PC)	60 Credits
3.	Professional Elective (PE)	18 Credits



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## DEPARTMENT OF MECHATRONICS ENGINEERING Minutes of Meeting-BoS -19<sup>th</sup> March, 2022

4.	Open Elective (OE)	6 credits
5.	Employability Enhancement Courses (EE)	26 Credits
6.	Online Courses (OL)	6 credits
7.	Program specific Value added courses	4 Credits
8.	Audit Courses (AU)	2 courses

Category of Courses in B.E Mechatronics Engineering			
Semester	Total Credits		
I	22		
II	23		
III	27		
IV	25		
V	25		
VI	25		
VII	25		
VIII	8		
Total	180		

#### **BOS 004.10**

**Dr. K. Kannan** presented the credit Assignment for B.E Mechatronics Engineering – R2021



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## DEPARTMENT OF MECHATRONICS ENGINEERING Minutes of Meeting-BoS -19<sup>th</sup> March, 2022

Contact Period per week	Credits
1 Lecture (L) Period	1
1 Tutorial (T) Period	1
2 or 3 Laboratory (P) Periods (Laboratory / EM Courses like Seminar / Project work / Case Study etc.)	1
4 Laboratory (P) Periods (Laboratory / EM Courses like Seminar / Project work / Case Study etc.)	2

Duration of Industrial training / Internship	Credits
2 weeks	1
4 weeks	2
6 weeks	3

Note: One week = 40 internship hours

## Assessment Procedure for awarding Marks -R2021

S.No.	Category of	Marks				
	Course	Continuous Assessments	End Semester Examination			
1.	Theory Courses	40 %	60 %			
2.	Laboratory Courses	50 %	50 %			
3.	Theory Integrated with Laboratory Courses	Assessment through Theory – 20 % Assessment through Laboratory- 20 % Total – 40 %	Theory - 60 %			
4.	Laboratory Integrated with Theory Courses	Assessment through Theory - 15 % Assessment through Laboratory - 35 % (Total - 50 %)	Laboratory - 50 %			
5.	Project Work	60 %	40 %			
6.	Other Employability Enhancement Courses	100 %	***			



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## DEPARTMENT OF MECHATRONICS ENGINEERING Minutes of Meeting-BoS -19<sup>th</sup> March, 2022

Practical					8	
1	MT2451	Project Work	0	0	16	8
1		1				
	Total (	Credits	0	0	16	8

Members approved the proposed R2021 Curriculum.

Members suggested to include Machine Kinematics in Machine Dynamics for Mechatronics Engineering Course and to rename the course as Mechanism of Machines.

#### **BOS 004.12**

Dr. K. Kannan presented the III & IV Semester Syllabus of R2021 for discussion and approval.

Members discussed about the design thinking course in detail as it is moved from audit course to Core Course.

Dr.T.Asokan enquired about the contents of Mathematics Laboratory in detail.

### **BOS 004.13**

The BoS Coordinator Mr.A.Arulkumar AP/MTRE Proposed the vote of thanks

(Dr.K.Kannan) BoS Chairman – MTRE

HOD / MTRE

th 33/03/202.



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09.12.2022

## **Minutes of Meeting**

As per the current needs in industry, we need to provide the Value-added course for 2021 – 2025 Batch Batch, II year UG candidates in 2022 – 2023 EVEN semester. In connection with this, the three member committee has been constituted to scrutinize the Value-added course evaluation, meeting has been convened on 09.12.2022 (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 "Robot Operating System (ROS)" for 2021-2025 Batch

#### **Members List**

S.No.	Members	Category	Signature
1	Dr.K.Kannan, Prof. & Head/MTRE	Head	& & P
2	Mr.S.Wesley Moses Samdoss, AP/MTRE	UG Coordinator	ATMESS
3	Mr.S.David Blessley, AP/MTRE	VAC Incharge	



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# DEPARTMENT OF MECHATRONICS ENGINEERING (Accredited by NBA, New Delhi)

## Value Added Course on Robot Operating Systems (ROS)

(for II year Mechatronics Engineering Students)



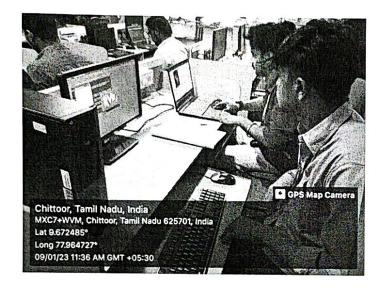


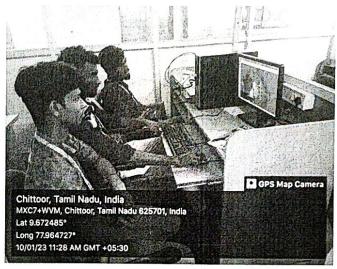
## Introduction to ROS: ROS Tools & Utilities



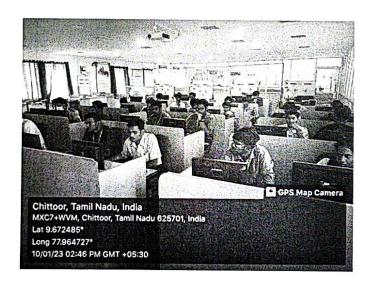


ROS Ecosystem: Communication in ROS





## Robot Modelling & Gazebo Simulation





Assessment Test & Viva voce

VAC Coordinator

HoD/MTRE



COIMBATORE, TAMIL NADU - 641028

# Value added course on Robot Operating System

# CERTIFICATE OF COMPLETION

## THIS IS TO CERTIFY

			Mr/	Ms.			PAKY		The state of the s				
for	attending	the	five	days	value	added	course	on	Robot	Operating	System	offered	by

RobotoAI Technologies from 05-01-2023 to 10-01-2023 in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology,

Virudhunagar.

ASSESSMENT MARKS: ...76 ...%

KAMARAJ COLLEGE OF ENGG. & TECH

ACADEMIC DIRECTOR ROBOTOAI TECHNOLOGIES

1100 KAMARAJ COLLEGE OF ENGG. & TECH

X. W.





COIMBATORE, TAMIL NADU - 641028

# Value added course on Robot Operating System

# CERTIFICATE OF COMPLETION

## THIS IS TO CERTIFY

Mr/Ms. KISHOURE KUMAR D

for attending the five days value added course on Robot Operating System offered by RobotoAI Technologies from 05-01-2023 to 10-01-2023 in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

ASSESSMENT MARKS: ...89 %

CO-ORDINATOR KAMARAJ COLLEGE OF ENGG. & TECH

ACADEMIC DIRECTOR ROBOTOAL TECHNOLOGIES

HOD KAMARAJ COLLEGE OF ENGG. & TECH

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# Value added course on Robot Operating System

# CERTIFICATE OF COMPLETION

## THIS IS TO CERTIFY

	Mr/Ms.	SATHISH	KUMAR	K	•			
for attending th	ie five days v	alue added co	ourse on	Robot Ope	eratin	g System o	offered	by
RobotoAI Tec								
Department of M	Mechatronics E	Engineering, K	amaraj (	College of E	nginee	ering and Te	echnolo	gy,
Virudhunagar.								

ASSESSMENT MARKS: ...93.....%

CO-ORDINATOR KAMARAJ COLLEGE OF ENGG. & TECH ACADEMIC DIRECTOR ROBOTOAL TECHNOLOGIES H()D KAMARAJ COLLEGE OF ENGG. & TECH

k. 2





COIMBATORE, TAMIL NADU - 641028

# Value added course on Robot Operating System CERTIFICATE OF COMPLETION

## THIS IS TO CERTIFY

Mr/Ms.	GOKILAN K.G.

for attending the five days value added course on Robot Operating System offered by RobotoAI Technologies from 05-01-2023 to 10-01-2023 in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

ASSESSMENT MARKS: ...79...%

CO-ORDINATOR KAMARAJ COLLEGE OF ENGG. & TECH ACADEMIC DIRECTOR ROBOTOAL TECHNOLOGIES

HOD KAMARAJ COLLEGE OF ENGG. & TECH

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# Value added course on Robot Operating System

# CERTIFICATE OF COMPLETION

## THIS IS TO CERTIFY

Mr/Ms.	ARUN	PRATOP K	

for attending the five days value added course on Robot Operating System offered by RobotoAI Technologies from 05-01-2023 to 10-01-2023 in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

ASSESSMENT MARKS: ...\$5...%

CO-ORDINATOR KAMARAJ COLLEGE OF ENGG. & TECH ACADEMIC DIRECTOR ROBOTOAL TECHNOLOGIES

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&. & P.



COIMBATORE, TAMIL NADU - 641028

# Value added course on Robot Operating System CERTIFICATE OF COMPLETION

## THIS IS TO CERTIFY

Mr/Ms	DINESH K	
TATE I TAKE		

for attending the five days value added course on Robot Operating System offered by RobotoAI Technologies from 05-01-2023 to 10-01-2023 in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

ASSESSMENT MARKS: ....86.....%

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# Value added course on Robot Operating System

# CERTIFICATE OF COMPLETION

## THIS IS TO CERTIFY

Mr/Ms.	POISOLLAN GA	
1411/1419	**********************************	:

for attending the five days value added course on Robot Operating System offered by RobotoAI Technologies from 05-01-2023 to 10-01-2023 in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

ASSESSMENT MARKS: 92 %

CO-ORDINATOR KAMARAJ COLLEGE OF ENGG. & TECH ACADEMIC DIRECTOR ROBOTOAL TECHNOLOGIES

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## Value added course on Robot Operating System

# CERTIFICATE OF COMPLETION

### THIS IS TO CERTIFY

Mr/Ms.	KARUNA	SAGAR	T

for attending the five days value added course on Robot Operating System offered by RobotoAI Technologies from 05-01-2023 to 10-01-2023 in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

ASSESSMENT MARKS: ....93.....%

CO-ORDINATOR KAMARAJ COLLEGE OF ENGG. & TECH ACADEMIC DIRECTOR ROBOTOAL TECHNOLOGIES

HOD KAMARAJ COLLEGE OF ENGG. & TECH

A. A -



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# Value added course on Robot Operating System

# **CERTIFICATE OF COMPLETION**

## THIS IS TO CERTIFY

Mr/Ms.	ARAVIND Y
The reserve sector decountries of the sector	

for attending the five days value added course on Robot Operating System offered by RobotoAI Technologies from 05-01-2023 to 10-01-2023 in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

ASSESSMENT MARKS: . 84 ... %

CO-ORDINATOR KAMARAJ COLLEGE OF ENGG. & TECH ACADEMIC DIRECTOR ROBOTOAL TECHNOLOGIES

HOD KAMARAJ COLLEGE OF ENGG. & TECH

b. 2



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# Value added course on Robot Operating System CERTIFICATE OF COMPLETION

## THIS IS TO CERTIFY

Mr/Ms.	ARIVISHNU	R	
	*****************		

for attending the five days value added course on Robot Operating System offered by RobotoAI Technologies from 05-01-2023 to 10-01-2023 in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

ASSESSMENT MARKS: 98 %

ACADEMIC DIRECTOR ROBOTOAL TECHNOLOGIES

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b. b-

CO-ORDINATOR KAMARAJ COLLEGE OF ENGG. & TECH





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# Value added course on Robot Operating System

# CERTIFICATE OF COMPLETION

## THIS IS TO CERTIFY

Mr/Ms.	ESAKKI	BALA	KARTHIK	K

for attending the five days value added course on Robot Operating System offered by RobotoAI Technologies from 05-01-2023 to 10-01-2023 in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

CO-ORDINATOR KAMARAJ COLLEGE OF ENGG. & TECH ACADEMIC DIRECTOR ROBOTOAL TECHNOLOGIES

HOD KAMARAJ COLLEGE OF ENGG. & TECH

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COIMBATORE, TAMIL NADU - 641028

# Value added course on Robot Operating System

# CERTIFICATE OF COMPLETION

## THIS IS TO CERTIFY

Mr/Ms.	MITHUN	KUMAR	GS	

for attending the five days value added course on Robot Operating System offered by RobotoAI Technologies from 05-01-2023 to 10-01-2023 in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

ASSESSMENT MARKS: 90 %

CO-ORDINATOR KAMARAJ COLLEGE OF ENGG. & TECH ACADEMIC DIRECTOR ROBOTOAL TECHNOLOGIES

KAMARAJ COLLEGE OF ENGG. & TECH

&. X-



COIMBATORE, TAMIL NADU - 641028

## Value added course on Robot Operating System

# CERTIFICATE OF COMPLETION

## THIS IS TO CERTIFY

	Mr/ <del>Ms</del>	. ${\cal S}$ l	JBASH CH	ANDRU					
for attending	the five day	ys value	added cou	rse on	Robot	Operati	ng System	offered	bу
RobotoAI T	Technologies	from 0	5-01-2023	to 1	0-01-20	23 in	association	with	the
Department o	of Mechatroni	cs Engine	ering, Kan	naraj C	ollege o	of Engine	eering and T	echnolo	gy,
Virudhunaga	r.								

ASSESSMENT MARKS: ....99 .... %

CO-ORDINATOR KAMARAJ COLLEGE OF ENGG. & TECH ACADEMIC DIRECTOR ROBOTOAL TECHNOLOGIES

HOD KAMARAJ COLLEGE OF ENGG. & TECH





COIMBATORE, TAMIL NADU - 641028

## Value added course on Robot Operating System

# CERTIFICATE OF COMPLETION

## THIS IS TO CERTIFY

Mr/Ms.	ARAVINTHA	KUMAR	S

for attending the five days value added course on Robot Operating System offered by RobotoAI Technologies from 05-01-2023 to 10-01-2023 in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

ASSESSMENT MARKS: ...92 ... %

CO-ORDINATOR KAMARAJ COLLEGE OF ENGG. & TECH ACADEMIC DIRECTOR ROBOTOAL TECHNOLOGIES

HOD KAMARAJ COLLEGE OF ENGG. & TECH



COIMBATORE, TAMIL NADU - 641028

# Value added course on Robot Operating System

# CERTIFICATE OF COMPLETION

THIS IS TO CERTIFY

Mr/Ms. SIVANESAKARTHIC RAK

for attending the five days value added course on Robot Operating System offered by RobotoAI Technologies from 05-01-2023 to 10-01-2023 in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

ASSESSMENT MARKS: ... 80 ... %

CO-ORDINATOR KAMARAJ COLLEGE OF ENGG. & TECH ACADEMIC DIRECTOR ROBOTOAL TECHNOLOGIES

HOD KAMARAJ COLLEGE OF ENGG. & TECH

X. & \_\_



COIMBATORE, TAMIL NADU - 641028

# Value added course on Robot Operating System

# CERTIFICATE OF COMPLETION

## THIS IS TO CERTIFY

Mr/Ms.	SANGEETHALAKSHMI M	
		ı

for attending the five days value added course on Robot Operating System offered by RobotoAI Technologies from 05-01-2023 to 10-01-2023 in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

ASSESSMENT MARKS: 93 %

CO-ORDINATOR KAMARAJ COLLEGE OF ENGG. & TECH ACADEMIC DIRECTOR ROBOTOAL TECHNOLOGIES

HOD KAMARAJ COLLEGE OF ENGG. & TECH

b. x-





COIMBATORE, TAMIL NADU - 641028

# Value added course on Robot Operating System CERTIFICATE OF COMPLETION

## THIS IS TO CERTIFY

Mr/Ms.	LAKSHMAN	HARI. C

for attending the five days value added course on Robot Operating System offered by RobotoAI Technologies from 05-01-2023 to 10-01-2023 in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

ASSESSMENT MARKS: ... 88 ... %

CO-ORDINATOR KAMARAJ COLLEGE OF ENGG. & TECH ACADEMIC DIRECTOR ROBOTOAL TECHNOLOGIES

MOD KAMARAJ COLLEGE OF ENGG. & TECH



COIMBATORE, TAMIL NADU - 641028

# Value added course on Robot Operating System

# CERTIFICATE OF COMPLETION

## THIS IS TO CERTIFY

Mr/Ms. MUTHU PANDI Y

for attending the five days value added course on Robot Operating System offered by RobotoAI Technologies from 05-01-2023 to 10-01-2023 in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

ASSESSMENT MARKS: ... 87 %

CO-ORDINATOR KAMARAJ COLLEGE OF ENGG. & TECH ACADEMIC DIRECTOR ROBOTOAL TECHNOLOGIES

HOD KAMARAJ COLLEGE OF ENGG. & TECH

X. A.



COIMBATORE, TAMIL NADU - 641028

# Value added course on Robot Operating System

# CERTIFICATE OF COMPLETION

## THIS IS TO CERTIFY

Mr/Ms.	NILESH	A

for attending the five days value added course on Robot Operating System offered by RobotoAI Technologies from 05-01-2023 to 10-01-2023 in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

ASSESSMENT MARKS: ...85 %

CO-ORDINATOR KAMARAJ COLLEGE OF ENGG. & TECH ACADEMIC DIRECTOR ROBOTOAL TECHNOLOGIES

HOD KAMARAJ COLLEGE OF ENGG. & TECH

X. X-





COIMBATORE, TAMIL NADU - 641028

### Value added course on Robot Operating System

### CERTIFICATE OF COMPLETION

#### THIS IS TO CERTIFY

Mr/Ms.	SELVAMAN! T
	***************************************

for attending the five days value added course on Robot Operating System offered by RobotoAI Technologies from 05-01-2023 to 10-01-2023 in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

ASSESSMENT MARKS: ...\$3....%

CO-ORDINATOR KAMARAJ COLLEGE OF ENGG. & TECH ACADEMIC DIRECTOR
ROBOTOAL TECHNOLOGIES

HOD KAMARAJ COLLEGE OF ENGG. & TECH

× . &



COIMBATORE, TAMIL NADU - 641028

### Value added course on Robot Operating System

### CERTIFICATE OF COMPLETION

#### THIS IS TO CERTIFY

Mr/Ms.	BHARATHI R

for attending the five days value added course on Robot Operating System offered by RobotoAI Technologies from 05-01-2023 to 10-01-2023 in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

ASSESSMENT MARKS: ... &2....%

CO-ORDINATOR KAMARAJ COLLEGE OF ENGG. & TECH ACADEMIC DIRECTOR ROBOTOAL TECHNOLOGIES



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## Value added course on Robot Operating System

### CERTIFICATE OF COMPLETION

#### THIS IS TO CERTIFY

SURVA VIGNESH R

***************************************
for attending the five days value added course on Robot Operating System offered b
RobotoAI Technologies from 05-01-2023 to 10-01-2023 in association with th
Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology
Virudhunagar.

ASSESSMENT MARKS: ... 89 ... %

CO-ORDINATOR KAMARAJ COLLEGE OF ENGG. & TECH

Mr/Ma

ACADEMIC DIRECTOR ROBOTOAI TECHNOLOGIES

KAMARAJ COLLEGE OF ENGG. & TECH

&. De.



COIMBATORE, TAMIL NADU - 641028

## Value added course on Robot Operating System

### CERTIFICATE OF COMPLETION

#### THIS IS TO CERTIFY

Mr/Ms.	SAROJ KANNA	

for attending the five days value added course on Robot Operating System offered by RobotoAI Technologies from 05-01-2023 to 10-01-2023 in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

ASSESSMENT MARKS: ...91....%

CO-ORDINATOR KAMARAJ COLLEGE OF ENGG. & TECH ACADEMIC DIRECTOR ROBOTOAL TECHNOLOGIES



COIMBATORE, TAMIL NADU - 641028

# Value added course on Robot Operating System CERTIFICATE OF COMPLETION

#### THIS IS TO CERTIFY

Mr/Ms.	<b>MOHAMMED</b>	AMMAR S

for attending the five days value added course on Robot Operating System offered by RobotoAI Technologies from 05-01-2023 to 10-01-2023 in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

ASSESSMENT MARKS: ...93 ... %

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HOD KAMARAJ COLLEGE OF ENGG. & TECH

X. X.



COIMBATORE, TAMIL NADU - 641028

# Value added course on Robot Operating System CERTIFICATE OF COMPLETION

#### THIS IS TO CERTIFY

Mr/Ms.	HARIHARAN B
	*************************************

for attending the five days value added course on Robot Operating System offered by RobotoAI Technologies from 05-01-2023 to 10-01-2023 in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

CO-ORDINATOR KAMARAJ COLLEGE OF ENGG. & TECH ACADEMIC DIRECTOR ROBOTOAL TECHNOLOGIES

HOD KAMARAJ COLLEGE OF ENGG. & TECH

k.20



COIMBATORE, TAMIL NADU - 641028

### Value added course on Robot Operating System

### CERTIFICATE OF COMPLETION

#### THIS IS TO CERTIFY

Mr/Ms. JEGADHISH PANDIARAJ T.S

for attending the five days value added course on Robot Operating System offered by RobotoAI Technologies from 05-01-2023 to 10-01-2023 in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

ASSESSMENT MARKS: ...91...%

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ACADEMIC DIRECTOR ROBOTOAL TECHNOLOGIES



COIMBATORE, TAMIL NADU - 641028

### Value added course on Robot Operating System

### CERTIFICATE OF COMPLETION

#### THIS IS TO CERTIFY

Mr/Ms. ARAYINDH AARYA G

for attending the five days value added course on Robot Operating System offered by RobotoAI Technologies from 05-01-2023 to 10-01-2023 in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

ASSESSMENT MARKS: ...93...%

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COIMBATORE, TAMIL NADU - 641028

# Value added course on Robot Operating System CERTIFICATE OF COMPLETION

#### THIS IS TO CERTIFY

Mr/Ms. SRI RAMACHANDRAN K

for attending the five days value added course on Robot Operating System offered by RobotoAI Technologies from 05-01-2023 to 10-01-2023 in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

ASSESSMENT MARKS: ....89...%

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### Value added course on Robot Operating System

### CERTIFICATE OF COMPLETION

#### THIS IS TO CERTIFY

Mr/Ms. PARVATHARAJAN B

for attending the five days value added course on Robot Operating System offered by RobotoAI Technologies from 05-01-2023 to 10-01-2023 in association with the Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

ASSESSMENT MARKS: ...9&.....%

CO-ORDINATOR KAMARAJ COLLEGE OF ENGG. & TECH ACADEMIC DIRECTOR ROBOTOAL TECHNOLOGIES HOD KAMARAJ COLLEGE OF ENGG. & TECH

&.X-



COIMBATORE, TAMIL NADU - 641028

### Value added course on Robot Operating System

### CERTIFICATE OF COMPLETION

#### THIS IS TO CERTIFY

GIRI.P

for attending the five days value added course on Robot Operating System offered by
RobotoAI Technologies from 05-01-2023 to 10-01-2023 in association with the
Department of Mechatronics Engineering, Kamaraj College of Engineering and Technology
Virudhunagar.

ASSESSMENT MARKS: ... \$4... %

CO-ORDINATOR KAMARAJ COLLEGE OF ENGG. & TECH

Mr/Ma

ACADEMIC DIRECTOR ROBOTOAL TECHNOLOGIES

Date	Morning	Afternoon
Day 1	Introduction to ROS Framework and Prerequisites Installation, Setting up the system and validation Importance of ROS Why ROS?	Understanding Communication in ROS  Understanding communication in ROS (Final system level and Graph level)
Day 2	ROS Ecosystem  • Getting started with ROS Programming, communication • ROS nodes, topics, messages • ROS Services	ROS Ecosystem  • Getting started with ROS Programming, communication • ROS nodes, topics, messages • ROS Services
Day 3	ROS Tools and Utilities (Mobile robot)  URDF  Build robot using URDF and Visualize in RViz  Basic motions in ROS	ROS Tools and Utilities (Manipulator)  Modeling and visualizing robots  Solidworks to URDF
Day 4	Robot Modeling Students will model their own mobile robot	Modeling the environment Students will make their own custom environment and make it ready for the robot simulation
Day 5	Robot Tele-Operation	<ul> <li>ROS Gazebo full simulation</li> <li>Knowledge required to develop a real robot</li> <li>Assessment &amp; Viva voce</li> </ul>

### ROS MCQ -

\* Required

This form is designed to evaluate the understanding of the students attended the value added course on ROS.

1.	Select the below applications which can be developed using ROS *
	Mark only one oval.
	Mobile robot
	Manipulators
	Drones
	All the above
2.	The Unidirectional way of message communication is *
	Mark only one oval.
	Service
	Action
	Pub & Sub
	None of the above
3.	Which of the below can be used for executing a single node in ROS? *
	Mark only one oval.
	rosrun
	roslaunch
	Both A & B
	None of the above

4.	Select the correct syntax for executing a single node in ROS [Package name: * demo_pkg, node name: pub.py]
	Mark only one oval.
	rosrun pub.py
	rosrun pub.py demo_pkg
	rosrun demo_pkg pub.py
	None of the above
5.	The command used to know the active topics communicating with ROS Master *
	Mark only one oval.
	rostopic list
	rostopic view
	rostopic echo
	orostopic hz
6.	Which of the below is used for simulations in ROS? *
	Mark only one oval.
	RViz
	rqt-graph
	Gazebo
	None of the above

	The communication that terminates after successful request and response is $^\star$	
		Mark only one oval.
		Pub & Sub
		Service
		Action
		None of the above
	8.	All ROS packages have to be located inside the directory *
		Mark only one oval.
		build
		devel
		src
		None of the above
	9.	URDF files provides information about *
		Mark only one oval.
		sensors used in the robot
		links of the robot
		joints of the robot
		All the above

10.	Which of the below is the odometry source connected to the wheel of a mobile robot	*	
	Mark only one oval.		
	IMU Encoder LIDAR None of the above		
11.	You are provided with a robot having IMU and LIDAR, Odometry source from motor drivers. You are asked to run all these sources at a single execution. which of the below command will you use?	*	(
	Mark only one oval.		
	rosrun to execute all sources individually roslaunch Both A & B None of the above		
12.	For a data communication in publisher & subscriber has to be established, which of the below has to be same?	*	6
	Mark only one oval.		
	Topic  Data type  Both A & B  None of the above		

13.	URDF - Type of joint the wheels configured in the differential robot is $^{\star}$
	Mark only one oval.
	fixed continuous floating None of the above
	* 2D madala incida gazaba cimulation?
14.	Can we bring in real time features as 3D models inside gazebo simulation? *
	Mark only one oval.
	Yes
	No
15.	To add new staircase, window, walls, which of the following option is used in * Gazebo?
	Mark only one oval.
	Model Editor
	Building Editor
	Environment editor
	None of the above
16.	The orientations with respect to Y, X, Z axes respectively are *
	Mark only one oval.
	Pitch, roll, yaw
	roll, pitch, yaw
	yaw, pitch, roll
	yaw, roll, pitch

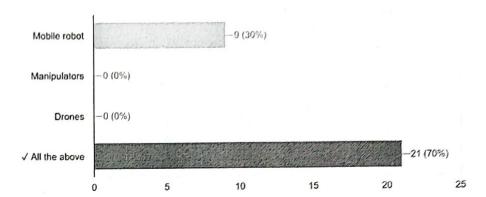
17.	In ROS URDF, the units for * length (distance), mass, orientation (angle) respectively are
	Mark only one oval.
	meter, kg, radian
	meter, kg, degrees
	millimeter, kg, degrees
	None of the above
18.	According to REP 103 standards, which of the following rule is used for frame * conversions.
	Mark only one oval.
	RIGHT HAND RULE
	LEFT HAND RULE
	THUMB FINGER RULE
	None of the above
19.	In rospy,  a = 5, b = 10, c = "abcd", d = a + b  You need to publish the addition of a & b. which of the following is used
	Mark only one oval.
	pub.publish(a)
	pub.Publish(d)
	pub.publish(d)
	None of the above

20.	Find out the ROS workspace structure. *		
	Mark only one oval.		
	build, devel, src		
	launch, src, pkgs	*	
	build, urdf, pkgs		
	None of the above		

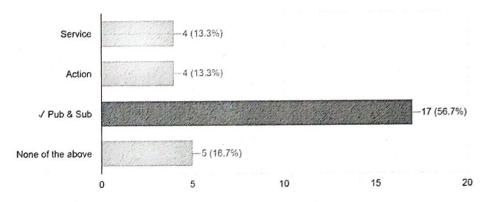
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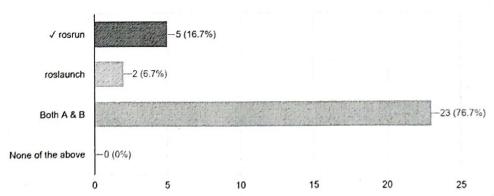
Select the below applications which can be developed using ROS 21 / 30 correct responses



The Unidirectional way of message communication is 17 / 30 correct responses

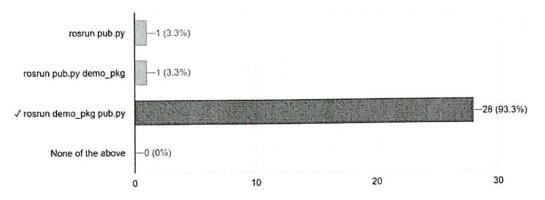


Which of the below can be used for executing a single node in ROS? 5/30 correct responses

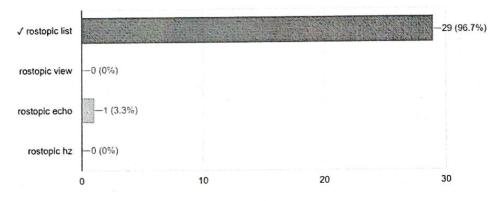


Select the correct syntax for executing a single node in ROS [Package name: demo\_pkg, node name: pub.py]

28 / 30 correct responses

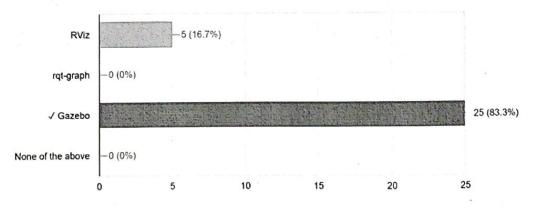


The command used to know the active topics communicating with ROS Master 29 / 30 correct responses

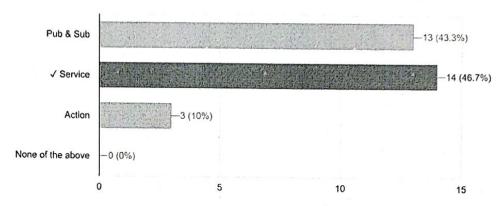


Which of the below is used for simulations in ROS?

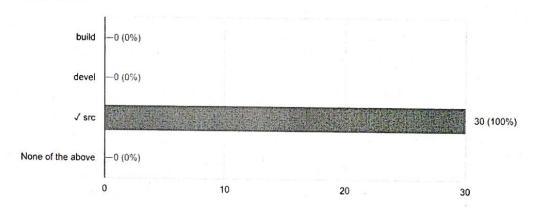
25 / 30 correct responses



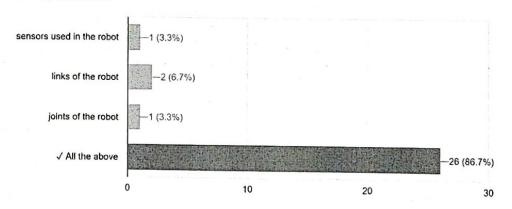
The communication that terminates after successful request and response is 14/30 correct responses



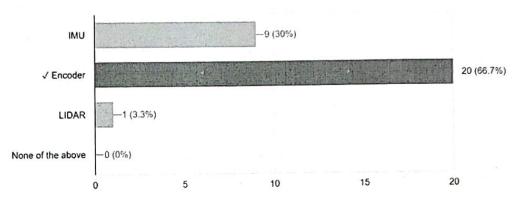
All ROS packages have to be located inside the directory 30 / 30 correct responses



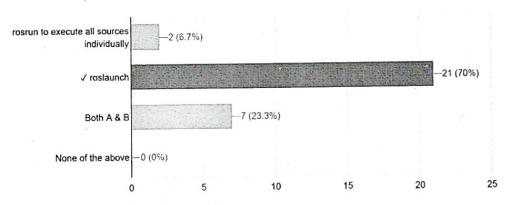
URDF files provides information about 26 / 30 correct responses



Which of the below is the odometry source connected to the wheel of a mobile robot  $20\,/\,30$  correct responses

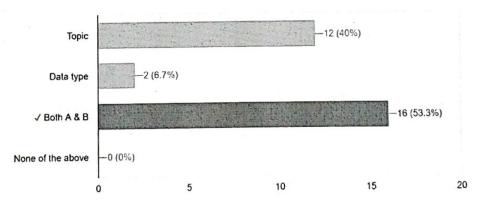


You are provided with a robot having IMU and LIDAR, Odometry source from motor drivers. You are asked to run all these sources at a single execution, which of the below command will you use? 21 / 30 correct responses

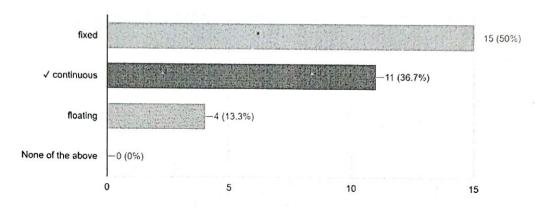


For a data communication in publisher & subscriber has to be established, which of the below has to be same?

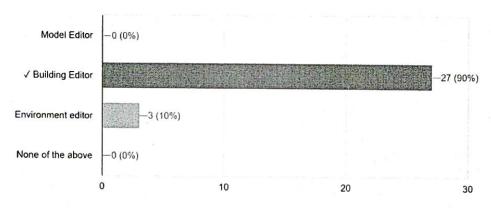
16 / 30 correct responses



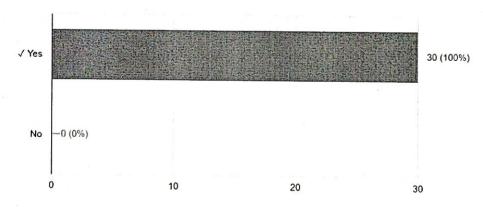
URDF - Type of joint the wheels configured in the differential robot is 11 / 30 correct responses



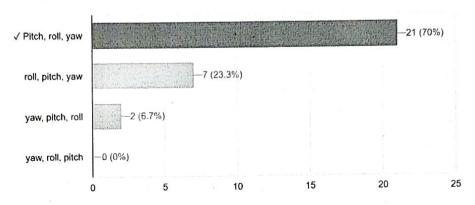
To add new staircase, window, walls, which of the following option is used in Gazebo? 27 / 30 correct responses



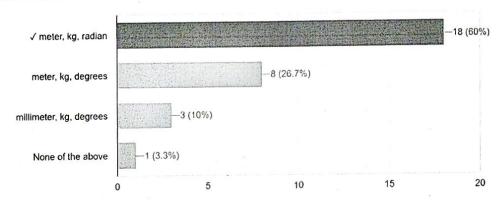
Can we bring in real time features as 3D models inside gazebo simulation?  $30\,$ /  $30\,$  correct responses



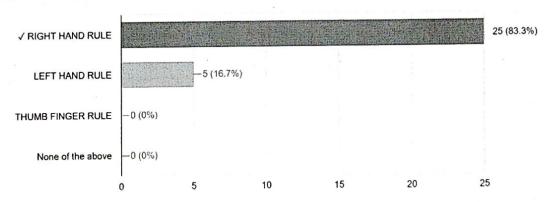
The orientations with respect to Y, X, Z axes respectively are 21 / 30 correct responses



In ROS URDF, the units for length (distance), mass, orientation (angle) respectively are 18 / 30 correct responses

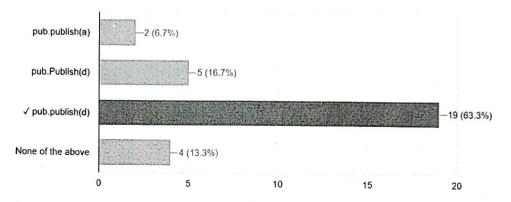


According to REP 103 standards, which of the following rule is used for frame conversions. 25 / 30 correct responses



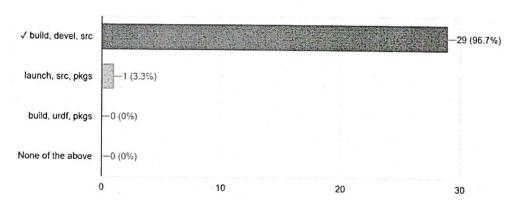
In rospy, a = 5, b = 10, c = "abcd", d = a + b You need to publish the addition of a & b. which of the following is used

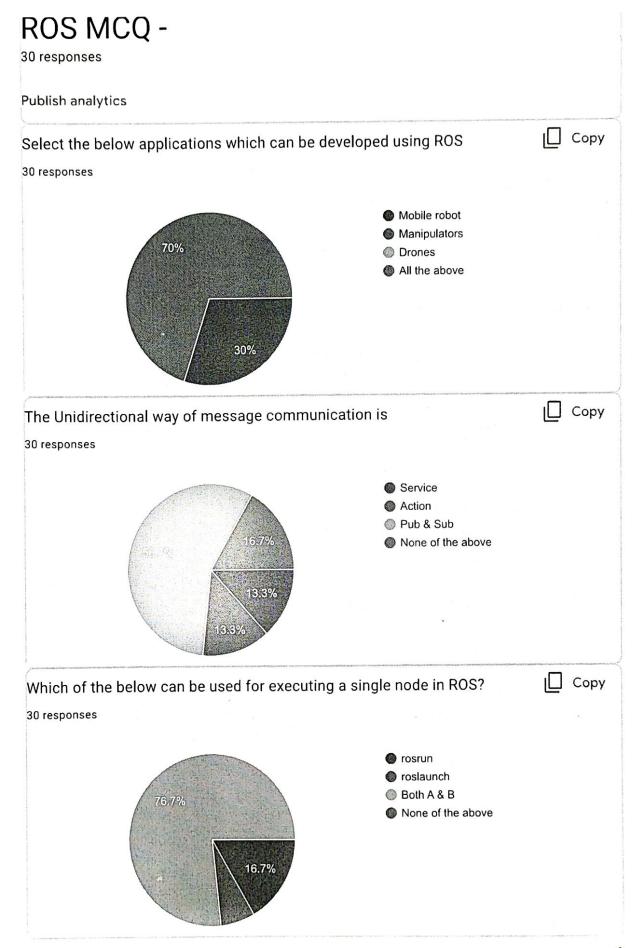
19 / 30 correct responses

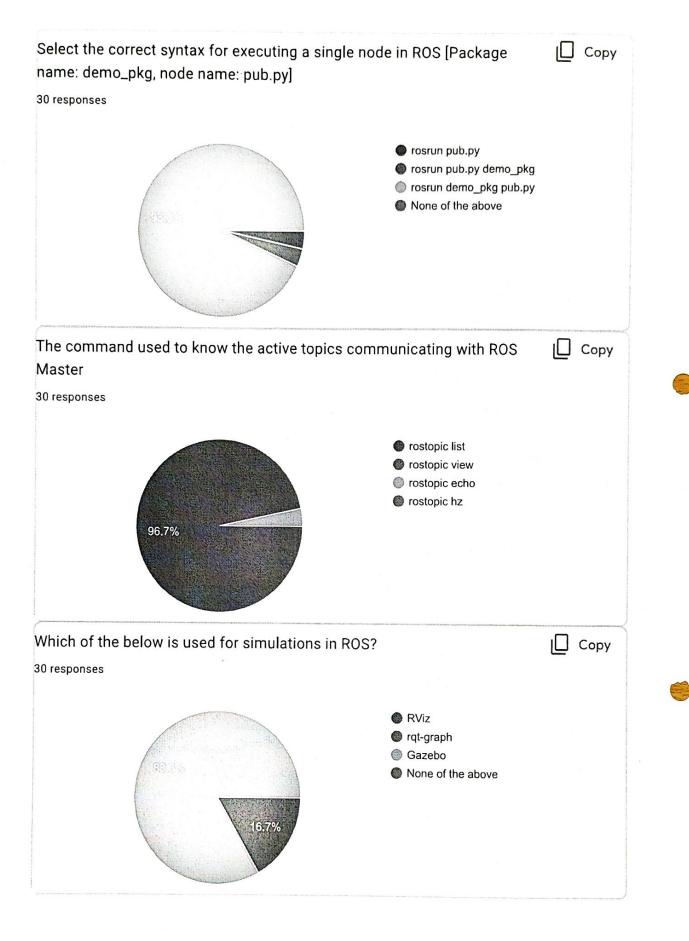


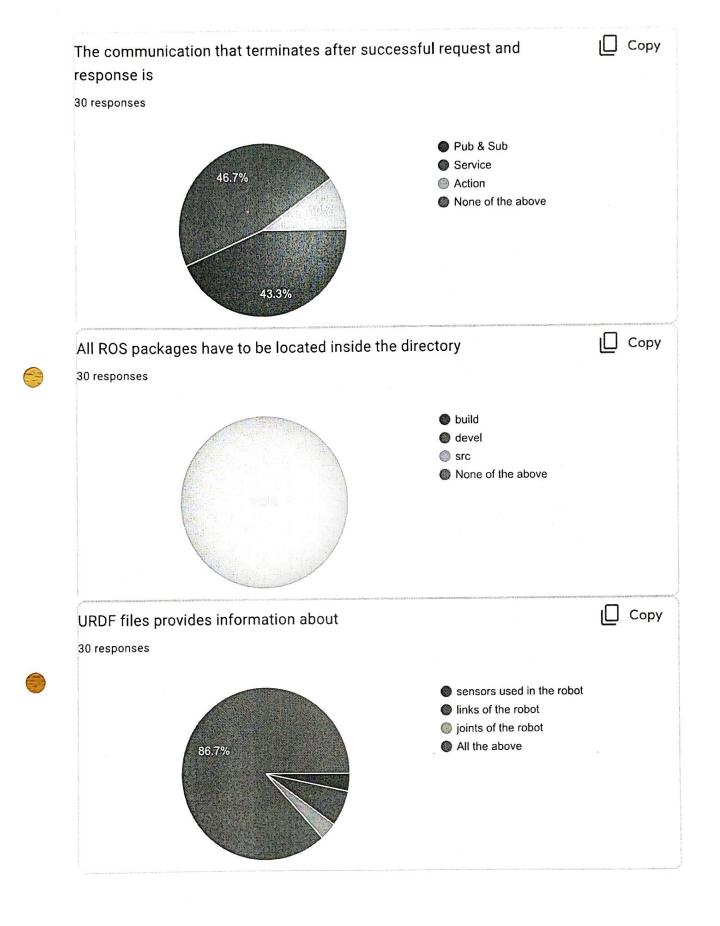
#### Find out the ROS workspace structure.

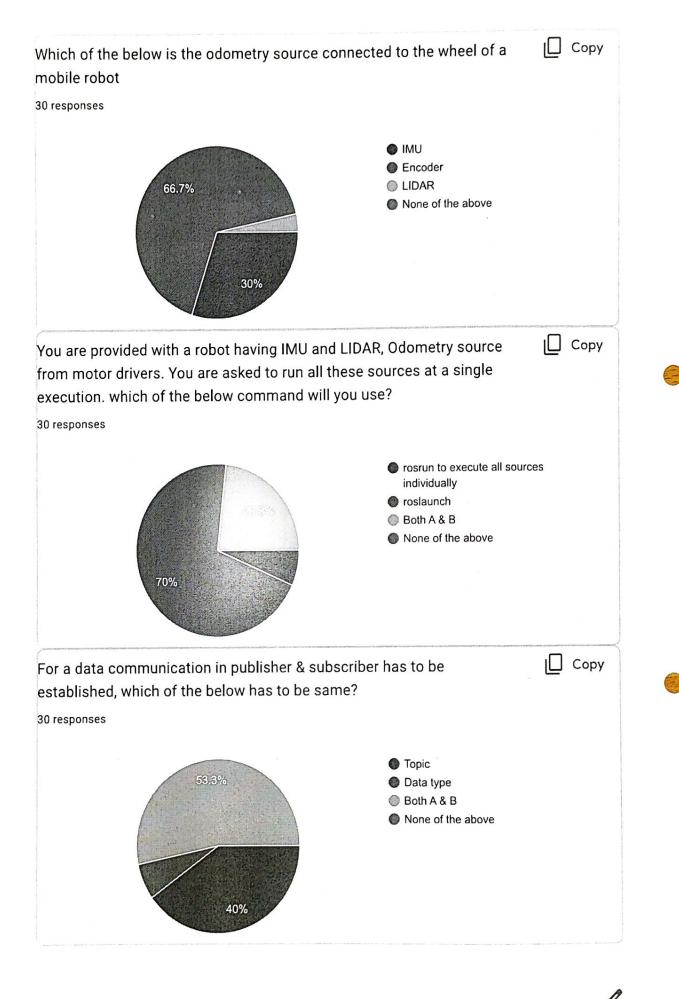
29 / 30 correct responses

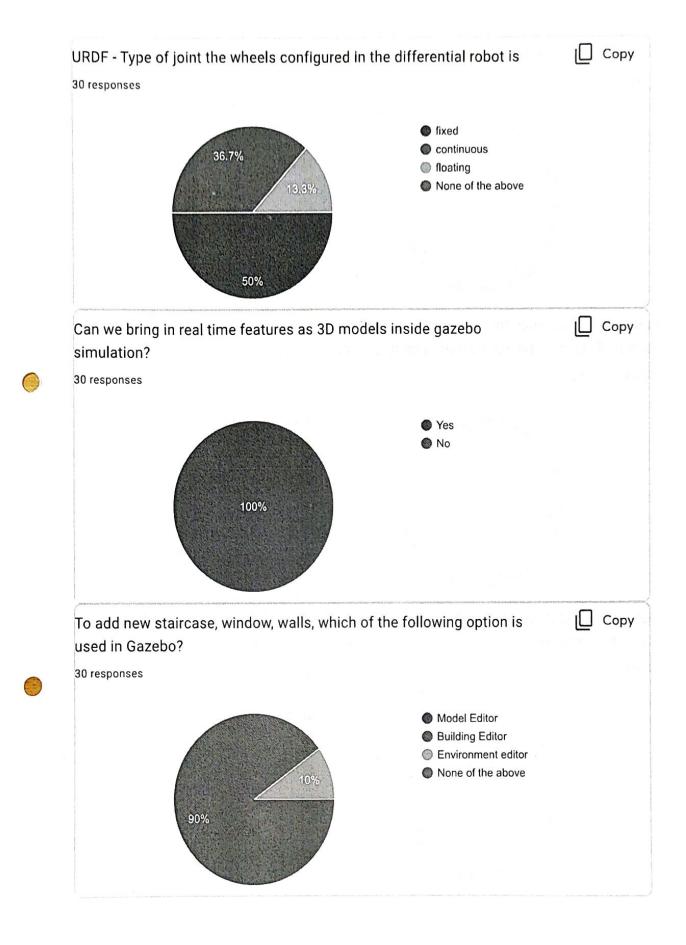


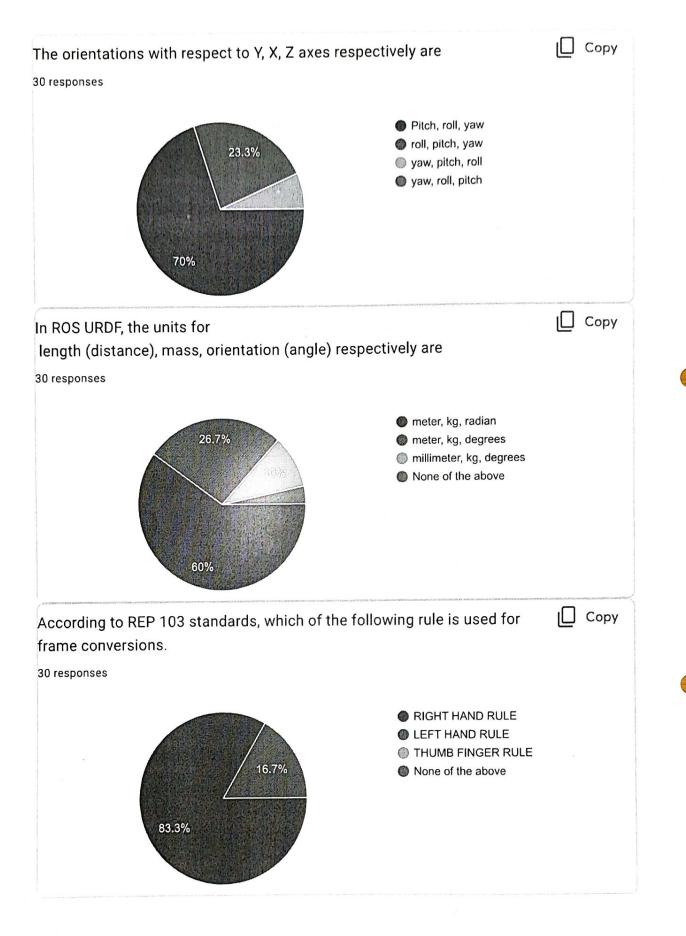


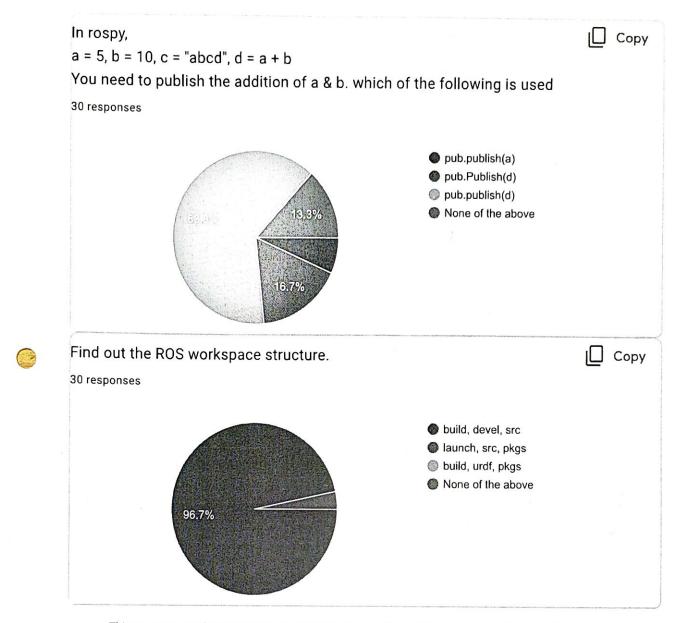












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S.P.G.Childambara Nadar - C.Nagammal Campus
S.P.G.C. Nagar, K.Vellakulam - 625 701 (Near VIRUDHUNAGAR).

#### DEPARTMENT OF MECHATRONICS ENGINEERING

#### **Attendance Sheet**

Value Added Course on "ROS" - 06.01.2023 (Day 2)

Signature					
S.No.	Roll Number	Name	Session I (9.00-10.50)	Session II (11.10-12.50)	Session III (01.30-04.00)
1	21UMT001	JEGADHISH PANDIARAJ T.S	T.S. Jagolhir	TS. Jogdlis	T.S. Jagdi
2	21UMT002	ARAVINDH AARYA.G	a. Dest	aditt	a Inthe
3	21UMT003	SRI RAMACHANDRAN K	KSPI	KAPA	(8) L
4	21UMT004	PARVATHARAJAN.B	3. 8	B.D.	B.R.
5	21UMT006	GIRI.P	?	PAO	Ph -
6	21UMT007	SELVAMANI.T	T. Selt	Tolle	Tiel
7	21UMT009	BHARATHI.R	P.BA	P.R.	F-80-
8	21UMT012	SURYAVIGNESH.R	-AB-	-A8-	-AB-
9	21UMT013	SAROJ KANNA	J. Swoj Karna.	J. Swoj Kanna	Jesonoj Kanna
10	21UMT014	MOHAMMED AMMAR.S	Amnas	Some	Ammas
11	21UMT015	HARIHARAN.B	tarky	Horta	#12-
12	21UMT016	SUBASH CHANDRU,P	P. Sodo	P. Sist wo	Partha
13	21UMT017	ARAVINTHA KUMAR.S	3 denoth 2	4 grandes	5. dravithate
14	21UMT018	SIVANESAKARTHIC.RA.K	RA. J. Sentyla	RA.K. Satur	PA.K. Santus
15	21UMT019	SANGEETHALAKSHMI.M	M. Sangathe	Moangeetha.	M Bargeitte
16	21UMT020	LAKSHMAN HARI.C	C.6/khts.	Cloudy.	C. 6 le hat
17	21UMT021	MUTHU PANDI.V	V, MM	Vinh	Vimyh
18	21UMT022	NILESH.A	A. Pilles	Acrely	Parley
19	21UMT023	POISOLLAN G.A	Julia .	Gentle 1	pully
20	21UMT024	KARUNA SAGAR.T	No.	Men	Aug
21	21UMT025	ARAVIND.V	V. Aavil	V. Awirl	V. Aravirl
22	21UMT026	ARIVISHNU.R	R.L.	4-11	RC
23	21UMT027	ESAKKI BALA KARTHIK.K	Kon	Ke	4ai
24	21UMT028	MITHUN KUMAR G.S	a.s. Mithun	a.s. Mithun	a.S. Mithen
25	21UMT029	ARSHAD PARWESH	S. Arshad	S. Austra	S. Asshed
26	21UMT030	KISHOURE KUMAR.D	an Bosecutida.	Doubendar	Dairen Com
27	21UMT031	SATHISH KUMAR.K	k Suffet	Le Suffer	K gate
28	21UMT032	GOKILAN.K.G	KG Gokil	K.G. Gokil	K, 4, Cokil
29	21UMT033	ARUN PRATOP.K	K. Sa Det	1. Jalos	MARIA
30	21UMT034	DINESH.K	K-Dinos)	Kariner	K. Sines

VAC Coordinator

HoD/MTRE



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

#### DEPARTMENT OF MECHATRONICS ENGINEERING

#### **Attendance Sheet**

Value Added Course on "ROS" - 07.01.2023 (Day 3)

,	Roll Number	Name	Signature Session I Session III			
S.No.			Session I (9.00-10.50)	Session II (11.10-12.50)	(01.30-04.00)	
1	21UMT001	JEGADHISH PANDIARAJ T.S	TSFL	T97).	J.S. 32	
2	21UMT002	ARAVINDH AARYA.G	a. d. H	6 Add to	a. Dad A	
3	21UMT003	SRI RAMACHANDRAN K	80	DV	3001	
4	21UMT004	PARVATHARAJAN.B	B	A TAKE	BRI	
5	21UMT006	GIRI.P	8	REST	REFIL	
6	21UMT007	SELVAMANI.T	Titla.	J 10/4	T-Jol Co	
7	21UMT009	BHARATHI.R	2.865	Y. Plant	A. W.	
8	21UMT012	SURYAVIGNESH.R	R.S.L	R.S.L.	8.8f	
9	21UMT013	SAROJ KANNA	JEwiej Konne	J. Sorojkom	Tsaraj Karea.	
10	21UMT014	MOHAMMED AMMAR.S	Amonas	July	Amana	
11	21UMT015	HARIHARAN.B	Ton	TA	1	
12	21UMT016	SUBASH CHANDRU.P	P. Sed	P. Sef	P. Surly	
13	21UMT017	ARAVINTHA KUMAR.S	5 deauth 35	Fravil 3	5-Armith	
14	21UMT018	SIVANESAKARTHIC.RA.K	RA. F. Sautruk	RAT Sulver	Ko.K. Salah	
15	21UMT019	SANGEETHALAKSHMI.M	M. Bangeotha	M Songethe	M. Sangata	
16	21UMT020	LAKSHMAN HARI.C	Diallus.	glaters.	Colatenis.	
17	21UMT021	MUTHU PANDI.V	MANY	V.W/L	NOME	
18	21UMT022	NILESH.A	(-)009	A Des	19 During	
19	21UMT023	POISOLLAN G.A	Willia	Warly	gully	
20	21UMT024	KARUNA SAGAR.T	regod	Sagar	Street	
21	21UMT025	ARAVIND.V	V. Aravial	V. Aravial	Vilanish	
22	21UMT026	ARIVISHNU.R	RA	Raile	P.2.	
23	21UMT027	ESAKKI BALA KARTHIK.K	Ki	Ki	Was a second	
24	21UMT028	MITHUN KUMAR G.S		a.s.mithun	G.S.Mishung	
25	21UMT029	ARSHAD PARWESH			S. Arshad	
26	21UMT030	KISHOURE KUMAR.D	pochonogons	Deinnestam	Doiloudoromo	
27	21UMT031	SATHISH KUMAR.K	K84	4.41	1 m	
28	21UMT032	GOKILAN.K.G	XC GOBY	MGtobil	R.G. Goleit	
29	21UMT033	ARUN PRATOP.K	M. D. Pot	V.A.PT	K. X Y Z	
30	21UMT034	DINESH.K	KATING	1 K-DIM	1x21ner	
	_					

VAC Coordinator

HoD/MTRE



(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

#### **Attendance Sheet**

Value Added Course on "ROS"-05.01.2023 (Day 1)

S.No. Roll Number  Name  Session I  (2.00-10.50)  1 21UMT001  2 21UMT002  ARAVINDH AARYA.G  3 21UMT003  SRI RAMACHANDRAN K  4 21UMT003  RAVINDH AARYA.B  6 21UMT006  GIRLP  6 21UMT007  SELVAMANI.T  7 21UMT009  BHARATHI.R  8 21UMT012  SURYAVIGNESH.R  9 21UMT013  SAROJ KANNA  10 21UMT014  MOHAMMED AMMAR.S  11 21UMT015  HARIHARAN.B  12 21UMT016  SUBASH CHANDRU.P  13 21UMT017  ARAVINTHA KUMAR.S  14 21UMT018  SIVANESAKARTHIC.RA.K  15 21UMT019  SANGEETHALAKSHMI.M  H. SANGLIK.  H. SANGLIK.  H. SANGLIK.  16 21UMT020  LAKSHMAN HARIC  LAKSHMAN HARIC  LAKSHMAN HARIC  17 21UMT021  MUTHU PANDI.V  V. M. V. M.  V. M. V. M.  V. M. V. M.  18 21UMT022  NILESH.A  PALLED  PA	value Added Course on "ROS"-05.01.2023 (Day 1)						
1 21UMT001 JEGADHISH PANDIARAJ T.S PROMINENT OF SELVAMANIT TO SELVAMANIT	CN						
2 21UMT002 ARAVINDH AARYA.G  3 21UMT003 SRI RAMACHANDRAN K  4 21UMT004 PARVATHARAJAN.B  5 21UMT006 GIRLP  6 21UMT007 SELVAMANLT  7 21UMT009 BHARATHI.R  8 21UMT012 SURYAVIGNESH.R  9 21UMT013 SAROJ KANNA  10 21UMT014 MOHAMMED AMMAR.S  11 21UMT015 HARIHARAN.B  12 21UMT016 SUBASH CHANDRU.P  13 21UMT017 ARAVINTHA KUMAR.S  14 21UMT018 SIVANESAKARTHIC.RA.K  15 21UMT019 SANGEETHALAKSHMI.M  16 21UMT010 LAKSHMAN HARIC  17 21UMT020 LAKSHMAN HARIC  18 21UMT021 MUTHU PANDLV  19 21UMT021 MUTHU PANDLV  11 21UMT022 NILESH.A  10 21UMT023 POISOLLAN G.A  20 21UMT024 KARUNA SAGAR.T  21 21UMT025 ARAVIND.V  22 21UMT026 ARIVISHNU.R  23 21UMT027 ESAKKI BALA KARTHIK.K  24 21UMT028 MITHUN KUMAR.S  25 21UMT029 ARSHAD PARWESH  26 21UMT030 COKILAN.K.G  27 21UMT031 SATHISH KUMAR.K  28 21UMT032 GOKILAN.K.G  29 21UMT031 SATHISH KUMAR.K  20 21UMT032 OKISHOURE KUMAR.D  21 21UMT032 OKISHOURE KUMAR.D  22 21UMT033 OKISHOURE KUMAR.D  23 21UMT030 KISHOURE KUMAR.R  24 21UMT031 SATHISH KUMAR.K  25 21UMT031 SATHISH KUMAR.K  26 21UMT032 GOKILAN.K.G  27 21UMT031 ARUN PATOP.K  28 21UMT033 ARUN PATOP.K  29 21UMT033 ARUN PATOP.K  20 21UMT031 KISHOURE KUMAR.R  20 21UMT031 KISHOURE KUMAR.R  21 21UMT032 GOKILAN.K.G  22 21UMT033 ARUN PATOP.K  24 21UMT033 ARUN PATOP.K  25 21UMT031 KISHOURE KUMAR.R  26 21UMT032 GOKILAN.K.G  27 21UMT031 ARUN PATOP.K  28 21UMT033 ARUN PATOP.K  29 21UMT033 ARUN PATOP.K  20 21UMT033 ARUN PATOP.K  21 21UMT033 ARUN PATOP.K  22 21UMT033 ARUN PATOP.K  23 21UMT033 ARUN PATOP.K  24 21UMT033 ARUN PATOP.K  25 21UMT033 ARUN PATOP.K  26 21UMT033 ARUN PATOP.K  27 21UMT033 ARUN PATOP.K  28 21UMT033 ARUN PATOP.K  29 21UMT033 ARUN PATOP.K  20 21UMT033 ARUN PATOP.K  20 21UMT034 ARUN PATOP.K  20 21UMT035 ARUN PATOP.K  20 21UMT034 ARAVIN PATOP.K  21 21UMT035 ARUN PATOP.K  21 21UMT035 ARUN PATOP.		Koll Number	Name		The state of the s		
3 21UMT003 SRI RAMACHANDRAN K  4 21UMT004 PARVATHARAJAN B  5 21UMT006 GIRLP  6 21UMT007 SELVAMANLT  7 21UMT009 BHARATHIR  8 21UMT012 SURYAVIGNESH R  9 21UMT013 SAROJ KANNA  10 21UMT014 MOHAMMED AMMAR.S  11 21UMT015 HARIHARAN B  12 21UMT016 SUBASH CHANDRU.P  13 21UMT017 ARAVINTHA KUMAR.S  14 21UMT018 SIVANESAKARTHIC.RA.K  15 21UMT019 SANGEETHALAKSHMI.M  16 21UMT020 LAKSHMAN HARIC  17 21UMT021 MUTHU PANDLV  18 21UMT022 NILESH.A  19 21UMT023 POISOLLAN G.A  20 21UMT024 KARUNA SAGAR.T  21 21UMT025 ARAVIND.V  22 21UMT026 ARIVISHNU.R  23 21UMT027 ESAKKI BALA KARTHIK.K  24 21UMT028 MITHUN KUMAR.S  25 21UMT029 ARSHAD PARWESH  26 21UMT030 GOKILAN.K.G  27 21UMT031 SATHISH KUMAR.K  28 21UMT031 SARIHAN RAND  29 21UMT033 OKISHOURE KUMAR.D  20 21UMT029 ARSHAD PARWESH  21 21UMT030 KISHOURE KUMAR.D  22 21UMT031 SATHISH KUMAR.K  24 21UMT032 GOKILAN.K.G  25 21UMT030 KISHOURE KUMAR.D  26 21UMT031 SATHISH KUMAR.K  27 21UMT031 SATHISH KUMAR.K  28 21UMT032 GOKILAN.K.G  29 21UMT033 ARUN PRATOP.K  29 21UMT033 ARUN PRATOP.K  20 21UMT030 KISHOURE KUMAR.D  21 21UMT031 SATHISH KUMAR.K  22 21UMT031 SATHISH KUMAR.K  24 21UMT032 GOKILAN.K.G  25 21UMT033 ARUN PRATOP.K  26 21UMT033 ARUN PRATOP.K  27 21UMT031 ARUN PRATOP.K  28 21UMT033 ARUN PRATOP.K  29 21UMT033 ARUN PRATOP.K  20 21UMT033 ARUN PRATOP.K  21 21UMT033 ARUN PRATOP.K  22 21UMT033 ARUN PRATOP.K  23 21UMT033 ARUN PRATOP.K  24 21UMT033 ARUN PRATOP.K  25 21UMT033 ARUN PRATOP.K  26 21UMT033 ARUN PRATOP.K  27 21UMT031 ARUN PRATOP.K  28 21UMT033 ARUN PRATOP.K  29 21UMT033 ARUN PRATOP.K  29 21UMT033 ARUN PRATOP.K  20 21UMT034 ARUN PRATOP.K  20 21UMT035 ARUN PRATOP.K  20 21UMT034 ARUN PRATOP.K	1	21UMT001	JEGADHISH PANDIARAJ T.S	-AB-	75 33	ISTA	
4 21UMTO04 PARVATHARAJAN.B  5 21UMTO06 GIRI.P  6 21UMTO07 SELVAMANI.T  7 21UMTO09 BHARATHI.R  8 21UMTO12 SURYAVIGNESH.R  9 21UMTO13 SAROJ KANNA  10 21UMTO14 MOHAMMED AMMAR.S  11 21UMTO15 HARIHARAN.B  12 21UMTO16 SUBASH CHANDRU.P  13 21UMTO16 SUBASH CHANDRU.P  13 21UMTO17 ARAVINTHA KUMAR.S  14 21UMTO18 SIVANESAKARTHIC.RA.K  15 21UMTO19 SANGEETHALAKSHMI.M  16 21UMTO20 LAKSHMAN HARI.C  21 LAKSHMAN HARI.C  21 LAKSHMAN HARI.C  21 LAKSHMAN HARI.C  21 LOMTO20 NILESH.A  19 21UMTO22 NILESH.A  19 21UMTO22 NILESH.A  10 21UMTO22 HARIHARAN.B  11 21UMTO22 NILESH.A  12 LOMTO20 HARIHARAN.B  13 21UMTO22 NILESH.A  14 21UMTO22 SILESH.A  15 21UMTO22 SILESH.A  16 21UMTO20 HARIHARAN.B  17 21UMTO21 MUTHU PANDI.V  18 21UMTO22 NILESH.A  19 21UMTO22 NILESH.A  21 21UMTO25 ARAVIND.V  22 21UMTO26 ARIVISHNU.R  23 21UMTO27 ESAKKI BALA KARTHIK.K  24 21UMTO28 MITHUN KUMAR G.S  25 21UMTO29 ARSHAD PARWESH  26 21UMTO30 KISHOURE KUMAR.D  27 21UMTO31 SATHISH KUMAR.K  28 21UMTO32 GOKILAN.K.G  29 21UMTO33 ARUN PRATOP.K  20 21UMTO33 ARUN PRATOP.K  20 21UMTO33 ARUN PRATOP.K  20 21UMTO33 ARUN PRATOP.K  21 21UMTO33 ARUN PRATOP.K  22 21UMTO33 ARUN PRATOP.K  23 21UMTO33 ARUN PRATOP.K  24 21UMTO33 ARUN PRATOP.K  25 21UMTO33 ARUN PRATOP.K  26 21UMTO33 ARUN PRATOP.K  27 21UMTO33 ARUN PRATOP.K  28 21UMTO33 ARUN PRATOP.K  29 21UMTO33 ARUN PRATOP.K  20 21UMTO33 ARUN PRATOP.	2	21UMT002	ARAVINDH AARYA.G	G. AnthA	G. Shaff	and the	
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6 21UMT007 SELVAMANI.T  7 21UMT009 BHARATHI.R  8 21UMT012 SURYAVIGNESH.R  9 21UMT013 SAROJ KANNA  10 21UMT014 MOHAMMED AMMAR.S  11 21UMT015 HARIHARAN.B  12 21UMT016 SUBASH CHANDRU.P  13 21UMT017 ARAVINTHA KUMAR.S  14 21UMT018 SIVANESAKARTHIC.RA.K  15 21UMT019 SANGEETHALAKSHMI.M  16 21UMT020 LAKSHMAN HARI.C  17 21UMT021 MUTHU PANDI.V  18 21UMT022 NILESH.A  19 21UMT023 POISOLLAN G.A  20 21UMT024 KARUNA SAGAR.T  21 21UMT025 ARAVIND.V  22 21UMT026 ARIVISHNU.R  23 21UMT027 ESAKKI BALA KARTHIK.K  24 21UMT028 MITHUN KUMAR.G.S  25 21UMT029 ARSHAD PARWESH  26 21UMT029 ARSHAD PARWESH  27 21UMT031 SATHISH KUMAR.K  28 21UMT032 GOKILAN.G.G  29 21UMT031 ARUNA RATOP.K  20 21UMT031 ARUNA RATOP.K  20 21UMT032 ARUNA SAGAR.T  30 21UMT032 ARSHAD PARWESH  31 21UMT032 ARSHAD PARWESH  42 21UMT033 ARUNA SAGAR.D  43 21UMT034 KISHOURE KUMAR.D  44 21UMT039 ARSHAD PARWESH  45 21UMT030 KISHOURE KUMAR.D  46 21UMT031 SATHISH KUMAR.K  47 20 21UMT031 ARUNA RATOP.K  48 21UMT032 ARUNA RATOP.K  49 21UMT033 ARUN PRATOP.K  40 21UMT033 ARUN PRATOP.K  40 21UMT033 ARUN PRATOP.K  40 21UMT033 ARUN PRATOP.K  40 21UMT033 ARUN PRATOP.K  41 21UMT033 ARUN PRATOP.K	4	21UMT004	PARVATHARAJAN.B	BR	Bus	Bay	
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9 21UMT013 SAROJ KANNA 10 21UMT014 MOHAMMED AMMAR.S 11 21UMT015 HARIHARAN.B 12 21UMT016 SUBASH CHANDRU.P 13 21UMT017 ARAVINTHA KUMAR.S 14 21UMT018 SIVANESAKARTHIC.RA.K 15 21UMT019 SANGEETHALAKSHMI.M 16 21UMT020 LAKSHMAN HARI.C 17 21UMT021 MUTHU PANDI.V 18 21UMT021 MUTHU PANDI.V 19 21UMT023 POISOLLAN G.A 19 21UMT023 POISOLLAN G.A 20 21UMT024 KARUNA SAGAR.T 21 21UMT025 ARAVIND.V 22 21UMT026 ARIVISHNU.R 23 21UMT027 ESAKKI BALA KARTHIK.K 24 21UMT028 MITHUN KUMAR G.S 25 21UMT029 ARSHAD PARWESH 26 21UMT020 ARSHAD PARWESH 27 21UMT031 SATHISH KUMAR.K 28 21UMT032 GOKILAN.K.G 29 21UMT033 ARU PRATOP.K 20 21UMT033 ARU PRATOP.K 21 21UMT030 ARU PRATOP.K 21 21UMT031 ARU PRATOP.K 22 21UMT033 ARU PRATOP.K 23 21UMT033 ARU PRATOP.K 24 21UMT030 ARU PRATOP.K 25 21UMT030 ARU PRATOP.K 26 21UMT031 ARU PRATOP.K 27 21UMT031 ARU PRATOP.K 28 21UMT032 ARU PRATOP.K 29 21UMT033 ARU PRATOP.K 20 21UMT033 ARU PRATOP.K 21 21UMT033 ARU PRATOP.K	7	21UMT009	BHARATHI.R	R. Blat	2.0	P.Blit	
10 21UMT014 MOHAMMED AMMAR.S  11 21UMT015 HARIHARAN.B  12 21UMT016 SUBASH CHANDRU.P  13 21UMT017 ARAVINTHA KUMAR.S  14 21UMT018 SIVANESAKARTHIC.RA.K  15 21UMT019 SANGEETHALAKSHMI.M  16 21UMT020 LAKSHMAN HARI.C  17 21UMT021 MUTHU PANDI.V  18 21UMT022 NILESH.A  19 21UMT023 POISOLLAN G.A  20 21UMT024 KARUNA SAGAR.T  21 21UMT025 ARAVIND.V  22 21UMT026 ARIVISHNU.R  23 21UMT027 ESAKKI BALA KARTHIK.K  24 21UMT028 MITHUN KUMAR G.S  25 21UMT029 ARSHAD PARWESH  26 21UMT020 KISHOURE KUMAR.D  27 21UMT031 SATHISH KUMAR.K  28 21UMT032 GOKILAN.K.G  29 21UMT033 ARU PRATOP.K  20 21UMT033 ARU PRATOP.K  20 21UMT031 SATHISH KUMAR.K  21 21UMT033 ARU PRATOP.K  22 21UMT033 ARU PRATOP.K  23 21UMT033 ARU PRATOP.K  24 21UMT033 ARU PRATOP.K	8	21UMT012	SURYAVIGNESH.R	-AB-	P.S.	R.81.	
11 21UMT015 HARIHARAN.B  12 21UMT016 SUBASH CHANDRU.P  13 21UMT017 ARAVINTHA KUMAR.S  14 21UMT018 SIVANESAKARTHIC.RA.K  15 21UMT019 SANGEETHALAKSHMI.M  16 21UMT020 LAKSHMAN HARI.C  17 21UMT021 MUTHU PANDI.V  18 21UMT022 NILESH.A  19 21UMT023 POISOLLAN G.A  20 21UMT024 KARUNA SAGAR.T  21 21UMT025 ARAVIND.V  22 21UMT026 ARIVISHNU.R  23 21UMT027 ESAKKI BALA KARTHIK.K  24 21UMT028 MITHUN KUMAR G.S  25 21UMT028 ARSHAD PARWESH  26 21UMT029 ARSHAD PARWESH  27 21UMT030 KISHOURE KUMAR.D  28 21UMT031 SATHISH KUMAR.K  29 21UMT032 GOKILAN.K.G  29 21UMT033 ARUN PRATOP.K  20 21UMT033 ARUN PRATOP.K  20 21UMT033 ARUN PRATOP.K  21 21UMT033 ARUN PRATOP.K  22 21UMT033 ARUN PRATOP.K  23 21UMT033 ARUN PRATOP.K  24 21UMT033 ARUN PRATOP.K	9	21UMT013	SAROJ KANNA	J. Saroj Kasha.	J. Soroj Karna.	J. Sang Kanna	
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21 21UMT025 ARAVIND.V  22 21UMT026 ARIVISHNU.R  23 21UMT027 ESAKKI BALA KARTHIK.K  24 21UMT028 MITHUN KUMAR G.S  25 21UMT029 ARSHAD PARWESH  26 21UMT030 KISHOURE KUMAR.D  27 21UMT031 SATHISH KUMAR.K  28 21UMT032 GOKILAN.K.G  29 21UMT033 ARUN PRATOP.K	19	21UMT023	POISOLLAN G.A	Buly	Shill	(Ault	
22 21UMT026 ARIVISHNU.R  23 21UMT027 ESAKKI BALA KARTHIK.K  24 21UMT028 MITHUN KUMAR G.S  25 21UMT029 ARSHAD PARWESH  26 21UMT030 KISHOURE KUMAR.D  27 21UMT031 SATHISH KUMAR.K  28 21UMT032 GOKILAN.K.G  29 21UMT033 ARUN PRATOP.K	20	21UMT024	KARUNA SAGAR.T	Sough	Sarry	9094	
22 21UMT026 ARIVISHNU.R  23 21UMT027 ESAKKI BALA KARTHIK.K  24 21UMT028 MITHUN KUMAR G.S  25 21UMT029 ARSHAD PARWESH  26 21UMT030 KISHOURE KUMAR.D  27 21UMT031 SATHISH KUMAR.K  28 21UMT032 GOKILAN.K.G  29 21UMT033 ARUN PRATOP.K  20 21UMT033 ARUN PRATOP.K  20 21UMT033 ARUN PRATOP.K  20 21UMT033 ARUN PRATOP.K  20 21UMT033 ARUN PRATOP.K  21 21UMT033 ARUN PRATOP.K  22 21UMT033 ARUN PRATOP.K  23 21UMT034 ARUN PRATOP.K  24 21UMT034 ARUN PRATOP.K  25 21UMT035 ARUN PRATOP.K  26 21UMT036 ARUN PRATOP.K  27 21UMT037 ARUN PRATOP.K	21	21UMT025	ARAVIND.V	V. Aravinh	V. Avarial	V. Araviale	
24 21UMT028 MITHUN KUMAR G.S  25 21UMT029 ARSHAD PARWESH  26 21UMT030 KISHOURE KUMAR.D  27 21UMT031 SATHISH KUMAR.K  28 21UMT032 GOKILAN.K.G  29 21UMT033 ARUN PRATOP.K  20 21UMT033 ARUN PRATOP.K  20 21UMT033 Dichaudouna Di	22	21UMT026	ARIVISHNU.R	R	De la companya della	R.A.	
25 21UMT029 ARSHAD PARWESH  26 21UMT030 KISHOURE KUMAR.D Dechauchuma Dichauchuma Dichauchu	23	21UMT027	ESAKKI BALA KARTHIK.K	Kai	Kai	Ka.	
25 21UMT030 KISHOURE KUMAR.D Dechausburner D	24	21UMT028	MITHUN KUMAR G.S	G.S.Mithun		G.S.Million	
26 21UMT030 KISHOURE KUMAR.D Dechauchanna De	25	21UMT029	ARSHAD PARWESH				
27 21UMT031 SATHISH KUMAR.K V. Salfehen L. Sakheler k. Satheler k.	26	21UMT030	KISHOURE KUMAR.D				
28 21UMT032 GOKILAN.K.G  29 21UMT033 ARUN PRATOP.K  CONTRACTOR OF THE PROPERTY	27	21UMT031	SATHISH KUMAR.K			10	
29 21UMT033 ARUN PRATOP.K	28	21UMT032	GOKILAN.K.G				
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	30	21UMT034	DINESH.K	KDinel	K. Dirus	K. Dinol	



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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

#### **Attendance Sheet**

Value Added Course on "ROS" - 10.01.2023 (Day 5)

			Signature		
S.No.	Roll Number	Name	Session I (9.00-10.50)	Session II	Session III (01.30-04.00)
1	21UMT001	JEGADHISH PANDIARAJ T.S	T-S-S-	(11.10-12.50)	T-S-J
2	21UMT002	ARAVINDH AARYA.G	Calh	Landett	Cart
3	21UMT003	SRI RAMACHANDRAN K	(12/1)		
4	21UMT004	PARVATHARAJAN.B	B. Bear	D. D.	25/20
5	21UMT006	GIRI.P	00	RI	RIP
6	21UMT007	SELVAMANI.T	T. SOLD	Tisel 1	T Col 2
7	21UMT009	BHARATHI.R	D Palin	Z BA	774
8	21UMT012	SURYAVIGNESH.R	R.SI	P. 21.	D SZ
9	21UMT013	SAROJ KANNA	J-Sara Warra	J-Saroj Kan	J. sorg Kan
10	21UMT014	MOHAMMED AMMAR.S	Kamas	Ammor	Ammor
11	21UMT015	HARIHARAN.B	1	Au	Fin
12	21UMT016	SUBASH CHANDRU.P	PSIL	P.S.July	P.S. 8
13	21UMT017	ARAVINTHA KUMAR.S	1/2/3	1 X13	441
14	21UMT018	SIVANESAKARTHIC.RA.K	RI & Shy Mit	DA & Stull	RA-to Sula
15	21UMT019	SANGEETHALAKSHMI.M	M. Sangasto	M-Saygeethe	, or somether
16	21UMT020	LAKSHMAN HARI.C	Clabble	allets.	a Lollowy.
17	21UMT021	MUTHU PANDI.V	Vin	r. M	King
18	21UMT022	NILESH.A	Marier.	A Dibil	D. Dury
19	21UMT023	POISOLLAN G.A	July 2	milts	andly
20	21UMT024	KARUNA SAGAR.T	agy.	Bry	NET _
21	21UMT025	ARAVIND.V	V. Algarina	M. Aluniat	Marid
22	21UMT026	ARIVISHNU.R	Ba	R. Azi	R.M.
23	21UMT027	ESAKKI BALA KARTHIK.K	Kann	K	Ri
24	21UMT028	MITHUN KUMAR G.S	G.S. Mithen	as. Mithun	as. Mithun
25	21UMT029	ARSHAD PARWESH	S. Archad	S. Archal	S. Arshad
26	21UMT030	KISHOURE KUMAR.D	Dothandounou	Dhiyayaama	Deila mullum
27	21UMT031	SATHISH KUMAR.K	k. 81	k. 31	KSL
28	21UMT032	GOKILAN.K.G	LC GOOT	KGGOKT	LC GODEL
29	21UMT033	ARUN PRATOP.K	4. John	1.12	V - 200
-/					

VAC Coordinator

HoD/MTRE



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#### DEPARTMENT OF MECHATRONICS ENGINEERING

#### **Attendance Sheet**

Value Added Course on "ROS" - 09.01.2023 (Day 4)

			Signature		
S.No.	Roll Number	Name	Session I (9.00-10.50)	Session II (11.10-12.50)	Session III (01.30-04.00)
1	21UMT001	JEGADHISH PANDIARAJ T.S	75-FA	TS 7	T-S-88
2	21UMT002	ARAVINDH AARYA.G	6. Indict	ahda	Golder
3	21UMT003	SRI RAMACHANDRAN K	WAD A	( DEP A	VAC C
4	21UMT004	PARVATHARAJAN.B	R	R Q	600
5	21UMT006	GIRI.P	9	R	R
6	21UMT007	SELVAMANI.T	Traller	Till to	7210 A
7	21UMT009	BHARATHI.R	R. BLY	PRINT	2.974
8	21UMT012	SURYAVIGNESH.R	2.31.	e.s.j.	R.S.
9	21UMT013	SAROJ KANNA	J. Sorof Karna	J-Swrol Kars	5 Sarofkan
10	21UMT014	MOHAMMED AMMAR.S	Amnas	Drinos	Anner
11	21UMT015	HARIHARAN.B	Jan	Lu	Zu
12	21UMT016	SUBASH CHANDRU.P	PSJUL	PSILON	P.S.A. da
13	21UMT017	ARAVINTHA KUMAR.S	3. Arounds	5. Arcuit	5. Availe
14	21UMT018	SIVANESAKARTHIC.RA.K	RO & Swith	ROX Sully	PAIC Synth
15	21UMT019	SANGEETHALAKSHMI.M	M. Sangestie	M Sangeth.	M. Sancetho
16	21UMT020	LAKSHMAN HARI.C	Classints.	alokhot.	plakehos.
17	21UMT021	MUTHU PANDI.V	NW	rimh	VMM
18	21UMT022	NILESH.A	D. Mary	A Deleg	PALL
19	21UMT023	POISOLLAN G.A	Pullin	Rully	With
20	21UMT024	KARUNA SAGAR.T	NERY.	Hery	See 1
21	21UMT025	ARAVIND.V	V. Aravinh	V. Javinh	V-Aravida
22	21UMT026	ARIVISHNU.R	BA	R.A.	· Riti
23	21UMT027	ESAKKI BALA KARTHIK.K	W	160-	Ke
24	21UMT028	MITHUN KUMAR G.S	G.S nithun	G-S-Mithun	C.S. mithun
25	21UMT029	ARSHAD PARWESH	S. Aswed	S. Assent	S. Arihad
26	21UMT030	KISHOURE KUMAR.D	D b i dura set une	Alaide a rolam	D. bish sucher
27	21UMT031	SATHISH KUMAR.K	15 21	6-Sa	-66
28	21UMT032	GOKILAN.K.G	Ky yolif	k.G. GobiL	A.C. debic
29	21UMT033	ARUN PRATOP.K	k. Aller	LAN	T. Bak
30	21UMT034	DINESH.K	K. Dinex	1C.Dinor	Ma MAR

VAC Coordinator

HOD/MTRE

ROS	MCQ.	
	- · - V	

This form is designed to evaluate the understanding of the students attended the value added course on ROS.

Email \*

21umt032@kamarajengg.edu.in

Select the below applications which can be developed using ROS  $^\star$ 

- Mobile robot
- Manipulators
- Drones
- All the above

The Unidirectional way of message communication is \*

- Service
- Action
- Pub & Sub
- None of the above

Which of the below can be used for executing	ng a single node in ROS? *
rosrun	
roslaunch	
Both A & B	
None of the above	
Select the correct syntax for executing a sin pub.py]	gle node in ROS [Package name: demo_pkg, node name: *
orosrun pub.py	
orosrun pub.py demo_pkg	
rosrun demo_pkg pub.py	
None of the above	
The command used to know the active topic	es communicating with ROS Master *
orostopic list	
O rostopic view	
O rostopic echo	
O Tostopie ceno	

Which of the below is used for simulations in ROS? *
O RViz
O rqt-graph
Gazebo
None of the above
The communication that terminates after successful request and response is *
Pub & Sub
O Service
O Action
None of the above
All ROS packages have to be located inside the directory *
O build
O devel
src src
None of the above
None of the above

URDF files provides information about *
sensors used in the robot
links of the robot
joints of the robot
All the above
Which of the below is the odometry source connected to the wheel of a mobile robot *
○ IMU
O Encoder
● LIDAR
None of the above
You are provided with a robot having IMU and LIDAR, Odometry source from motor drivers. You are * asked to run all these sources at a single execution. which of the below command will you use?
orosrun to execute all sources individually
o roslaunch
O Both A & B
None of the above

For a data communication in publisher & subscriber has to be established, which of the below has to be same?
O Topic
O Data type
Both A & B
None of the above
URDF - Type of joint the wheels configured in the differential robot is *
fixed
O continuous
O floating
O None of the above
Can we bring in real time features as 3D models inside gazebo simulation? *
Yes
O No

To add new staircase, window, walls, which of the following option	is used in Gazebo? *
Model Editor	
Building Editor	
C Environment editor	
None of the above	
The orientations with respect to Y, X, Z axes respectively are *	
Pitch, roll, yaw	
O roll, pitch, yaw	
yaw, pitch, roll	
yaw, roll, pitch	
In ROS URDF, the units for * length (distance), mass, orientation (angle) respectively are	
meter, kg, radian	
meter, kg, degrees	
millimeter, kg, degrees	

Accordi	ng to REP 103 standards, which of the following rule is used for frame conversions. *
O RIG	GHT HAND RULE
• LEI	FT HAND RULE
О ти	UMB FINGER RULE
O Nor	ne of the above
In rospy	*
	= 10, $c = \text{"abcd"}$ , $d = a + b$ ed to publish the addition of a & b. which of the following is used
Tou nec	a to publish the addition of a & b. which of the following is used
pul	b.publish(a)
O pul	b.Publish(d)
O pul	b.publish(d)
O No	one of the above
Find ou	at the ROS workspace structure. *
<b>b</b> ui	ild, devel, src
O lau	inch, src. pkgs
O bu	ild, urdf, pkgs
O No	one of the above

# Google Forms

# ROS MCQ -

This form is designed to evaluate the understanding of the students attended the value added course on ROS.

Email \* 21umt024@kamarajengg.edu.in

Select the below applications which can be developed using ROS \*

- Mobile robot
- Manipulators
- Drones
- All the above

The Unidirectional way of message communication is \*

- Service
- Action
- Pub & Sub
- None of the above

Which of the below can be used for executing a single node in ROS? *
rosrun
O roslaunch
O Both A & B
None of the above
Select the correct syntax for executing a single node in ROS [Package name: demo_pkg, node name: * pub.py]
orosrun pub.py
rosrun pub.py demo_pkg
rosrun demo_pkg pub.py
None of the above
The command used to know the active topics communicating with ROS Master *
rostopic list rostopic view
O rostopic echo
O rostopic hz

	Which of the below is used for simulations in ROS? *	
	RViz	
	O rqt-graph	
	O Gazebo	
	None of the above	
		70
	The communication that terminates after successful request and response is *	
3	Pub & Sub	
And the second second	O Service	
	O Action	
	None of the above	
No. of the second of the secon	All ROS packages have to be located inside the directory *	
	O build	
	O devel	
	src src	
	None of the above	

URDF files provides information about *
sensors used in the robot
links of the robot
joints of the robot
All the above
Which of the below is the odometry source connected to the wheel of a mobile robot *
■ IMU
O Encoder
O LIDAR
None of the above
You are provided with a robot having IMU and LIDAR, Odometry source from motor drivers. You are * asked to run all these sources at a single execution. which of the below command will you use?
or rosrun to execute all sources individually
o roslaunch
O Both A & B
O None of the above

	a data communication in publisher & subscriber has to be established, which of the below has to ame?
0	Topic
<b>(</b>	Data type
0	Both A & B
0	None of the above
URI	OF - Type of joint the wheels configured in the differential robot is *
(1)	fixed
0	continuous
0	floating
0	None of the above
****	
Can	we bring in real time features as 3D models inside gazebo simulation? *
<b>(9</b> )	Yes
0	No

To add new staircase, window, walls, which of the following option is used in Gazebo? *
Model Editor
Building Editor
Environment editor
None of the above
The orientations with respect to Y, X, Z axes respectively are *
O Pitch, roll, yaw
oroll, pitch, yaw
yaw, pitch, roll
yaw, roll, pitch
In ROS URDF, the units for length (distance), mass, orientation (angle) respectively are
meter, kg, radian
meter, kg, degrees
millimeter, kg. degrees
None of the above

According to REP 103 standards, which of the following rule is used for frame conversions. *
RIGHT HAND RULE
○ LEFT HAND RULE
THUMB FINGER RULE
None of the above
In rospy, *
a = 5, b = 10, c = "abcd", d = a + b You need to publish the addition of a & b. which of the following is used
pub.publish(a)
pub.Publish(d)
O pub.publish(d)
None of the above
Find out the ROS workspace structure. *
build, devel, src
launch, src. pkgs
O build, urdf, pkgs
None of the above

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# Google Forms

# TEST REPORT

Timestamp	Username	Total score
2023/01/10 2:51:14 pm GMT+5:30	21umt001@kamarajengg.edu.in	32.00 / 40
2023/01/10 2:48:30 pm GMT+5:30	21umt002@kamarajengg.edu.in	34.00 / 40
2023/01/10 2:53:49 pm GMT+5:30	21umt003@kamarajengg.edu.in	30.00 / 40
2023/01/10 3:04:05 pm GMT+5:30	21umt004@kamrajengg.edu.in	32.00 / 40
2023/01/10 3:01:51 pm GMT+5:30	21umt006@kamarajengg.edu.in	26.00 / 40
2023/01/10 2:57:05 pm GMT+5:30	21umt007@kamarajengg.edu.in	26.00 / 40
2023/01/10 2:48:54 pm GMT+5:30	21umt009@kamarajengg.edu.in	24.00 / 40
2023/01/10 2:54:17 pm GMT+5:30	21umt012@kamarajengg.edu.in	30.00 / 40
2023/01/10 2:49:03 pm GMT+5:30	21umt013@kamarajengg.edu.in	32.00 / 40
2023/01/10 2:51:35 pm GMT+5:30	21umt014@kamarajengg.edu.in	34.00 / 40
2023/01/10 2:54:17 pm GMT+5:30	21umt015@kamarajengg.edu.in	30.00 / 40
2023/01/10 2:58:48 pm GMT+5:30	21umt016@kamarjengg.edu.in	30.00 / 40
2023/01/10 3:04:15 pm GMT+5:30	21umt017@kamarajengg.edu.in	34.00 / 40
2023/01/10 2:59:23 pm GMT+5:30	21umt018@kamarajengg.edu.in	22.00 / 40
2023/01/10 2:51:55 pm GMT+5:30	21umt019@kamarajengg.edu.in	34.00 / 40
2023/01/10 2:58:51 pm GMT+5:30	21umt020@kamarajengg.edu.in	30.00 / 40
2023/01/10 3:01:53 pm GMT+5:30	21umt021@kamarajemgg.edu.in	28.00 / 40
2023/01/10 3:02:31 pm GMT+5:30	21umt022@kamarajengg.edu.in	26.00 / 40
2023/01/10 2:51:02 pm GMT+5:30	21umt023@kamarajengg.edu.in	34.00 / 40
2023/01/10 3:01:12 pm GMT+5:30	21umt024@kamarajengg.edu.in	24.00 / 40
2023/01/10 2:51:14 pm GMT+5:30	21umt025@kamarajengg.edu.in	24.00 / 40
2023/01/10 2:58:07 pm GMT+5:30	21umt026@kamarajengg.edu.in	34.00 / 40
2023/01/10 3:02:20 pm GMT+5:30	21umt027@kamarajengg.edu.in	26.00 / 40
2023/01/10 2:50:53 pm GMT+5:30	21umt028@kamarajengg.edu.in	32.00 / 40
2023/01/10 2:58:26 pm GMT+5:30	21umt029@kamarajengg.edu.in	18.00 / 40
2023/01/10 2:52:04 pm GMT+5:30	21umt030@kamarajengg.edu.in	30.00 / 40
2023/01/10 2:54:46 pm GMT+5:30	21umt031@kamarajengg.edu.in	34.00 / 40
2023/01/10 2:51:13 pm GMT+5:30	21umt032@kamarajengg.edu.in	22.00 / 40
2023/01/10 2:56:04 pm GMT+5:30	21umt033@kamarajengg.edu.in	26.00 / 40
2023/01/10 2:50:46 pm GMT+5:30	dineshmech2001@gmail.com	26.00 / 40

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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

10.01.2023

# Value Added Course on "Robot Operating System (ROS)"

#### **Project Demonstration marks**

S.	Roll	Name		Total			
No.	Number	,	Presentation (10)	Knowledge Acquired (20)	Creativity (20)	Viva & Result (10)	(60)
1	21UMT001	JEGADHISH PANDIARAJ T.S	10	20	20	9	59
2	21UMT002	ARAVINDH AARYA.G	10	20	19	(0	59
3	21UMT003	SRI RAMACHANDRAN K	10	. 20	20	9	59
4	21UMT004	PARVATHARAJAN.B	10	20	20	10	60
5	21UMT006	GIRI.P	10	19	19	10	58
6	21UMT007	SELVAMANI.T	10	19	19	9	57
7	21UMT009	BHARATHI.R	10	20	19	9	58
8	21UMT012	SURYAVIGNESH.R	10	20	19	10	59
9	21UMT013	SAROJ KANNA	10	20	19	10	59
10	21UMT014	MOHAMMED AMMAR.S	10	20	. 19	10	59
11	21UMT015	HARIHARAN.B	lo	20	20	9	59
12	21UMT016	SUBASH CHANDRU.P	10	20	19	10	59
13	21UMT017	ARAVINTHA KUMAR.S	10	20	19	9	58
14	21UMT018	SIVANESAKARTHIC.RA.K	10	20	19	9	58
15	21UMT019	SANGEETHALAKSHMI.M	10	20	20	9	59

			lo	20	20	10	
16	21UMT020	LAKSHMAN HARI.C	10	ta	20	9	58
17	21UMT021	MUTHU PANDI.V	10	2.0	20	9	59
18	21UMT022	NILESH.A	10	20	20	9	59
19	21UMT023	POISOLLAN G.A	10	20	19	9	58
20	21UMT024	KARUNA SAGAR.T	10	20	20	9	59
21	21UMT025	ARAVIND.V	10	20	20	10	60
22	21UMT026	ARIVISHNU.R	10	19	20	10	59
23	21UMT027	ESAKKI BALA KARTHIK.K	lo	19	18	8	55
24	21UMT028	MITHUN KUMAR G.S	10	19	19	10	58
25	21UMT029	ARSHAD PARWESH	10	20	19	9	58
26	21UMT030	KISHOURE KUMAR.D	10	20	<b>2</b> D	9	59
27	21UMT031	SATHISH KUMAR.K	10	20	19	9	58
28	21UMT032	GOKILAN.K.G	10	19	19	9	57
29	21UMT033	ARUN PRATOP.K	10	20	19	10	59
30	21UMT034	DINESH.K	10	20	20	10	60

Tueiner

r VAC

VAC Coordinator

HoD/MTRE



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#### Mark Statement

Department : Mechatronics Engineering		Regulation: KCET R21		
Year	× 11	Semester : IV		

: 11					
Roll No.	Reg. No.	Student Name			Total (100)
			` '	, ,	91
					93
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			Norma .		92
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			1,000		82
A SECULIAR S		AND AND THE CONTRACTOR OF THE			89
					91
				0.000	93
					89
					89
					92
21UMT018					80
21UMT019	92041115014	SANGEETHALAKSHMI.M		34	93
21UMT020	92041115008	LAKSHMAN HARI.C		30	88
21UMT021	92041115010	MUTHU PANDI. V	59	28	87
21UMT022	92041115011	NILESH.A	59	26	85
21UMT023	92041115013	POISOLLAN G.A	58	34	92
21UMT024	92041115007	KARUNA SAGAR.T	59	24	83
21UMT025	920421115301	ARAVIND.V	60	24	84
21UMT026	920421115302	ARIVISHNU.R	59	34	93
21UMT027	920421115306	ESAKKI BALA KARTHIK.K	55	26	81
21UMT028	920421115309	MITHUN KUMAR G.S	58	32	90
21UMT029	920421115303	ARSHAD PARWESH	58	18	76
21UMT030	920421115308	KISHOURE KUMAR.D	59	30	89
21UMT031	920421115310	SATHISH KUMAR.K	59	34	93
21UMT032	920421115307	GOKILAN.K.G	57	22	79
21UMT033	920421115304	ARUN PRATOP.K	59	26	85
21UMT034	920421115305	DINESH.K	60	26	86
	Roll No.  21UMT001  21UMT002  21UMT004  21UMT006  21UMT007  21UMT012  21UMT013  21UMT014  21UMT015  21UMT016  21UMT017  21UMT018  21UMT019  21UMT020  21UMT021  21UMT021  21UMT022  21UMT023  21UMT024  21UMT025  21UMT025  21UMT026  21UMT027  21UMT027  21UMT028  21UMT029  21UMT029  21UMT031  21UMT031  21UMT031	Roll No.         Reg. No.           21UMT001         92041115006           21UMT002         92041115001           21UMT003         92041115018           21UMT004         92041115012           21UMT006         92041115016           21UMT007         92041115016           21UMT009         92041115020           21UMT012         92041115020           21UMT013         92041115005           21UMT014         92041115005           21UMT015         92041115005           21UMT016         92041115001           21UMT017         92041115002           21UMT018         92041115001           21UMT019         92041115014           21UMT020         92041115010           21UMT021         92041115010           21UMT022         92041115011           21UMT023         92041115007           21UMT024         92041115007           21UMT025         920421115301           21UMT026         920421115302           21UMT027         920421115303           21UMT028         920421115303           21UMT030         920421115303           21UMT031         920421115300           21UMT032	Roll No.         Rcg. No.         Student Name           21UMT001         92041115006         JEGADHISH PANDIARAJ T.S           21UMT002         92041115001         ARAVINDH AARYA.G           21UMT003         92041115018         SRI RAMACHANDRAN K           21UMT004         92041115012         PARVATHARAJAN.B           21UMT006         92041115004         GIRLP           21UMT007         92041115003         BHARATHLR           21UMT012         92041115003         BHARATHLR           21UMT013         92041115015         SAROJ KANNA           21UMT014         92041115005         HARIHARAN.B           21UMT015         92041115009         MOHAMMED AMMAR.S           21UMT016         92041115019         SUBASH CHANDRU.P           21UMT017         92041115019         SUBASH CHANDRU.P           21UMT018         92041115017         SIVANESAKARTHIC.RA.K           21UMT019         92041115014         SANGEETHALAKSHMI.M           21UMT020         92041115014         SANGEETHALAKSHMI.M           21UMT021         92041115010         MUTHU PANDI.V           21UMT022         92041115011         NILESH.A           21UMT023         920421115013         POISOLLAN G.A           21UMT024 </td <td>Roll No.         Reg. No.         Student Name         Internal Marks (60)           21UMT001         92041115006         JEGADHISH PANDIARAJ T.S         59           21UMT002         92041115001         ARAVINDH AARYA G         59           21UMT003         92041115018         SRI RAMACHANDRAN K         59           21UMT004         92041115012         PARVATHARAJAN B         60           21UMT006         92041115004         GIRLP         58           21UMT007         92041115016         SELVAMANLT         57           21UMT009         92041115003         BHARATHLR         58           21UMT012         92041115003         BHARATHLR         58           21UMT012         92041115003         SURYAVIGNESH R         59           21UMT014         92041115015         SAROJ KANNA         59           21UMT014         92041115005         HARIHARAN B         59           21UMT015         92041115019         SUBASH CHANDRUP         59           21UMT016         92041115019         SUBASH CHANDRUP         59           21UMT017         92041115017         SIVANESAKARTHIC RA K         58           21UMT020         92041115017         SIVANESAKARTHIC RA K         58</td> <td>Roll No.         Reg. No.         Student Name         Internal Marks (60)         External Marks (40)           21UMT1001         92041115006         JEGADHISH PANDIARAJ T.S         59         32           21UMT1002         92041115018         SRI RAMACHANDRAN K         59         30           21UMT1004         92041115012         PARVATHARAJAN B         60         32           21UMT1006         92041115014         GIRL P         58         26           21UMT1007         92041115004         GIRL P         58         26           21UMT1009         92041115003         BHARATHLR         58         24           21UMT1012         92041115003         BHARATHLR         58         24           21UMT1013         92041115015         SAROJ KANNA         59         32           21UMT1014         92041115015         SAROJ KANNA         59         32           21UMT1015         92041115009         MOHAMMED AMMAR.S         59         30           21UMT1016         920411150019         SUBASH CHANDRUP         59         30           21UMT1017         92041115002         ARAVINTHA KUMAR.S         58         34           21UMT1018         92041115017         SIVANESAKARTHICRA.K         58</td>	Roll No.         Reg. No.         Student Name         Internal Marks (60)           21UMT001         92041115006         JEGADHISH PANDIARAJ T.S         59           21UMT002         92041115001         ARAVINDH AARYA G         59           21UMT003         92041115018         SRI RAMACHANDRAN K         59           21UMT004         92041115012         PARVATHARAJAN B         60           21UMT006         92041115004         GIRLP         58           21UMT007         92041115016         SELVAMANLT         57           21UMT009         92041115003         BHARATHLR         58           21UMT012         92041115003         BHARATHLR         58           21UMT012         92041115003         SURYAVIGNESH R         59           21UMT014         92041115015         SAROJ KANNA         59           21UMT014         92041115005         HARIHARAN B         59           21UMT015         92041115019         SUBASH CHANDRUP         59           21UMT016         92041115019         SUBASH CHANDRUP         59           21UMT017         92041115017         SIVANESAKARTHIC RA K         58           21UMT020         92041115017         SIVANESAKARTHIC RA K         58	Roll No.         Reg. No.         Student Name         Internal Marks (60)         External Marks (40)           21UMT1001         92041115006         JEGADHISH PANDIARAJ T.S         59         32           21UMT1002         92041115018         SRI RAMACHANDRAN K         59         30           21UMT1004         92041115012         PARVATHARAJAN B         60         32           21UMT1006         92041115014         GIRL P         58         26           21UMT1007         92041115004         GIRL P         58         26           21UMT1009         92041115003         BHARATHLR         58         24           21UMT1012         92041115003         BHARATHLR         58         24           21UMT1013         92041115015         SAROJ KANNA         59         32           21UMT1014         92041115015         SAROJ KANNA         59         32           21UMT1015         92041115009         MOHAMMED AMMAR.S         59         30           21UMT1016         920411150019         SUBASH CHANDRUP         59         30           21UMT1017         92041115002         ARAVINTHA KUMAR.S         58         34           21UMT1018         92041115017         SIVANESAKARTHICRA.K         58

VAC Coordinator

HoD/MTRE

Dean (Academic Courses)

# View results

Respondent

3 NILESH.A	Time to complete
	Time to complete
1. Your name *	
NILESH A	
2. Roll Number *	
920421umt022	
3. Registration Number *	
920421115011	
	*
4. Department *	
MECHATRONICS ENGINEERING	
5. Year *	
II	~

02:08

6	. Wei	ere objectives of the Event met? *		
		Completely agree		
		Strongly agree		
		Agree		
		Partly agree		
		Disagree		
7	. Was	as the program sequence well planned? *		
	(4)	Completely agree		
	$\bigcirc$	Strongly agree		
	0	Agree		
	0	Partly agree		
	0	Disagree		
8	. Wer	re the lectures clear and easy to understand? *		
		Completely agree		
U	0	strongly agree		
	0	Agree		
		Partly agree	*	
		Disagree		

9. Whether the instructor encouraged the interaction *
Completely agree
Strongly agree
Agree
Partly agree
Disagree
10. The information presented at this event was highly beneficial *
Completely agree
Strongly agree
Agree
Partly agree
Disagree
11. Organization of the Event was good *
Completely agree
Strongly agree
Agree
Partly agree
Disagree
12. Comments/Suggestions
THE SESSION WAS GOOD
De de

# View results

Respondent

4	arun pratop.K		Time to comp	ete
1. Your name *				
arun pratop.k				
2. Roll Number *				
21umt033				
3. Registration N	umber *			
9210421115304				
4. Department *				
MECHATRONICS	5			
5. Year *				
II		~		

34:52

6. We	ere objectives of the Event met? *	
	Completely agree	
	Strongly agree	
	Agree	
	Partly agree	
	Disagree	
7. Wa	as the program sequence well planned? *	
	Completely agree	
	Strongly agree	
	Agree	
	Partly agree	
0	Disagree	
8. We	ere the lectures clear and easy to understand? *	
(19)	Completely agree	
	strongly agree	
0	Agree	
0	Partly agree	
	Disagree	

		ether the instructor encouraged the interaction *
		Completely agree
		Strongly agree
		Agree
		Partly agree
		Disagree
10	). The	information presented at this event was highly beneficial *
		Completely agree
		Strongly agree
	0	Agree
		Partly agree
		Disagree
11	. Org	anization of the Event was good *
		Completely agree
		Strongly agree
		Agree
		Partly agree
		Disagree
12	. Com	nments/Suggestions
	<u></u>	re this class
	TIIK	k. &

# Feedback for 5 days Value Added Course on "Robot Operating System (ROS) "

Your response deadline is 1/10/2023. Send reminder to people who have not responded.

Remind them

30

Responses

02:50

Average time to complete

Active

Status

1. Your name

30

Responses

Latest Responses

"M.Sangeethalakshmi"

"Giri P"

"Sangeethalakshmi.M"

2 respondents (7%) answered cLakshman hari for this question.

Muthupandi V

**BALA KARTHIK** 

Arun pratop

S Arshad parwesh

Smohammed

dinesh k k cLakshman hari

Mithun P Subash chandru

arun pratopk CLkshman hari SAravintha kumar GOKILAN

#### 2. Roll Number

30

Responses

Latest Responses

"21umt019"

"21UMT006"

"21umt002"

3 respondents (10%) answered 21umt020 for this question.

21umt025

21umt009

21umt013

21umt007

21umt004

21umt034

umt020

21umt03

21UMT002

21UMT006

21umt016

21umt017

21umt015

21um1

21umt021

21UMT030

3. Registration Number

21umt027

30

Responses

Latest Responses

"920421115014"

"920421115004"

"920421115001"

3 respondents (10%) answered 920421115008 for this question.

920421115012

920421115301

920421115303

920421115003 21umt015

920421115305

920421115011

920421115015 920421115008 92104211153

920421115304

920421115019

920421115017 **92042111** 

920421115308 920421115009 30 Responses Latest Responses

"Mechatronics "

"Mechatronics Engineering "

"Mechatronics engineering"

9 respondents (30%) answered MECHATRONICS engineering for this question.

BE

Mtr

Mechatroir

# MECHATRONICS engine

**Mechanics Engineering** 

Mechatronics en

#### 5. Year

**(5)** II

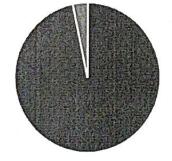
29

@ I

1

**A** 

0



### 6. Were objectives of the Event met?

- Completely agree
- 23
- Strongly agree
- 7

Agree

\_

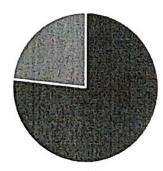
Partly agree

. . . . . . . . . .

0

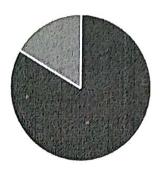
Disagree

0



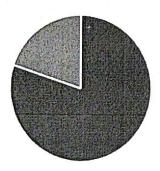
# 7. Was the program sequence well planned?

	Completely agree	25
	Strongly agree	5
	Agree	0
•		



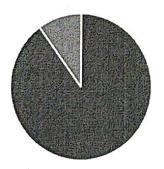
# 8. Were the lectures clear and easy to understand?

Completely agree	24
strongly agree	6
Agree	0
Partly agree	0
Disagree	0



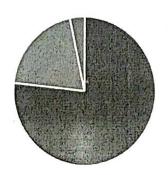
# 9. Whether the instructor encouraged the interaction

	Completely agree	27
	Strongly agree	3
0	Agree	0
	Partly agree	0
	Disagree	0



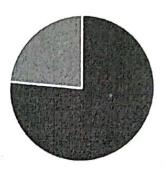
## 10. The information presented at this event was highly beneficial

0	Completely agree	23
0	Strongly agree	6
0	Agree	1
0	Partly agree	0
0	Disagree	0



## 11. Organization of the Event was good

	Completely agree	23
	Strongly agree	7
	Agree	0
•	Partly agree	0
	Disagree	0



#### 12. Comments/Suggestions

14 Responses Latest Responses "Good"

○ Update

3 respondents (21%) answered SESSION for this question.

domain wonderful session

no idea

**SESSION WAS GO** 

gazibo class

**SESSION** 

ROS <sub>I</sub>

Nice

courses lot of knowledge

idea about the ros environmental

useful<sup>ed</sup>

882

Ja. de



(**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

(Accredited by NBA, New Delhi)

# Report on "Value Added Course on Robot Operating System (ROS)"

11.01.2023

Department of Mechatronics Engineering, Kamaraj College of Engineering & Technology organized 5-day Value added course on "Robot Operating System (ROS)" for II year Mechatronics Engineering students from 05.01.2023 to 10.01.2023. Er. S. Rubesh Thirumani from RobotoAI Technologies, Coimbatore, 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 Robot modelling 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 programming using ROS tools and utilities and integrate them to create custom environment.

#### **Topics Covered**

- 1. ROS framework
- 2. Communication in ROS
- 3. ROS nodes
- 4. Build robot using URDF and visualize in RViz
- 5. Own robot modelling and custom environment creation
- 6. ROS Gazebo simulation

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 formal vote of thanks by Mr.Nilesh of II Mechatronics Engineering.

Co-Ordinator

HoD/MTRE