

**A Project Report  
on  
“PICK AND PLACE ROBOTIC ARM”**

**Submitted In Partial Fulfillment of the Requirements**

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**in**

**MECHANICAL ENGINEERING**

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LUCKNOW**

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## CERTIFICATE

This is to certify that **INDRAJEET SINGH YADAV** (1505440069) of Department of Mechanical Engineering, Babu Banarasi Das National Institute of Technology and Management, Lucknow have carried out the project work presented in this report entitled "**PICK AND PLACE ROBOTIC ARM**" for the award of Bachelor of Technology from Dr. A.P.J. Abdul Kalam Technical University, Lucknow under our supervision is a record of work and sincere efforts carried out by them.

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**INDRAJEET SINGH YADAV**

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## ABSTRACT

Mankind has always strived to give life like qualities to its artifacts in an attempt to find substitutes for himself to carry out his orders and also to work in a hostile environment. The popular concept of a mechanical arm is of a machine that looks and works like a human arm.

The industry is moving from current state of automation to Robotization, to increase productivity and to deliver uniform quality. The industrial robots of today may not look the least bit like a human being although all the research is directed to provide more and more anthropomorphic and humanlike features and super-human capabilities in these.

One type of robot commonly used in industry is a robotic manipulator or simply a mechanical arm. It is an open or closed kinematic chain of rigid links interconnected by movable joints. In some configurations, links can be considered to correspond to human anatomy as waist, upper arm and forearm with joint at shoulder and elbow. At end of arm a wrist joint connects an end effector which may be a tool and its fixture or a gripper or any other device to work.

Here how a pick and place mechanical arm can be designed for a workstation where loading and packing of lead batteries is been presented. All the various problems and obstructions for the loading process has been deeply analyzed and been taken into consideration while designing the pick and place mechanical arm.

## TABLE OF CONTENT

<b>CERTIFICATE.....</b>	<b>ii</b>
<b>ACKNOWLEDGEMENT.....</b>	<b>iii</b>
<b>ABSTRACT.....</b>	<b>iv</b>
<b>TABLE OF CONTENTS.....</b>	<b>v</b>
<b>LIST OF FIGURES.....</b>	<b>vii</b>
<b>CHAPTER 1 INTRODUCTION.....</b>	<b>1</b>
1.1 History of mechanical arm.....	02
1.2 Law Of Robotics.....	05
1.3 Components of mechanical arm.....	05
<b>CHAPTER 2 CLASSIFICATION OF MECHANICAL ARM.....</b>	<b>11</b>
2.1 Types of mechanical arm as per Application.....	11
2.2 Types of mechanical arm by Locomotion & Kinematics.....	14
<b>CHAPTER 3 SELECTION OF TASK.....</b>	<b>16</b>
3.1 Tasks.....	16
3.2 Selection of Tasks.....	18
3.3 Why Pick & Place mechanical arm.....	18
3.4 Defining work station.....	19
<b>CHAPTER 4 DESIGN PROCEDURE.....</b>	<b>20</b>
4.1 Factors to be considered while designing.....	20
<b>CHAPTER 5 STEPS OF DESIGN.....</b>	<b>23</b>
5.1 Selection of Product.....	23
5.2 Designing of Work space.....	23

5.3 Degree of Freedom.....	24
5.4 ATMEGA16 MICROCONTROLLERS.....	25
<b>CHAPTER 6 WORKS TO BE DONE.....</b>	<b>26</b>
6.1 Selection of Parts.....	26
6.2 Completion of Model .....	26
6.3 Interfacing with the human .....	27
<b>CHAPTER 7 HARDWARE REQUIREMENT.....</b>	<b>28</b>
7.1 Vehicle parts.....	28
7.2 Arm parts.....	28
7.3 Bluetooth control.....	28
<b>CHAPTER 8 MAIN PARTS OF PROJECT.....</b>	<b>29</b>
8.1 Mechanical arm vehicle.....	29
8.2 Mechanical Arm.....	30
8.3 End effector.....	31
8.4 Controls.....	32
<b>CHAPTER 9 ADVANTAGES,DISADVANTAGES,APPLICATIONS</b>	
<b>AND FUTURE SCOPE.....</b>	<b>34</b>
9.1 Advantages.....	34
9.2 Disadvantages.....	35
9.3 Applications.....	35
9.4 Future scope.....	37
<b>REFERENCES.....</b>	<b>38</b>

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## • LIST OF FIGURES

### FIGURES

Fig 1.1 Structure of mobile mechanical arm.....	6
Fig 1.2 Circuit diagram of power source.....	7
Fig 1.3 D C Motor .....	7
Fig 1.4 Track wheel .....	8
Fig 1.5 Worm and spur gear set.....	8
Fig 1.6 Mechanical grippers.....	9
Fig 1.7 Vacuum gripper.....	10
Fig 2.1 Industrial mechanical arm.....	12
Fig 2.2 Mobile mechanical arm.....	12
Fig 2.3 Agriculture mechanical arm.....	13
Fig 5.1 Degree of freedom.....	24
Fig 5.2 Microcontroller.....	25
Fig 6.1 Components of model.....	26
Fig 8.1 Mechanical arm vehicle.....	29
Fig 8.2 Mechanical arm.....	30
Fig 8.3 End effector.....	31
Fig 8.4 Control screen.....	32
Fig 8.5 Calculations.....	33
Fig 9.1 Wiring system of project.....	36