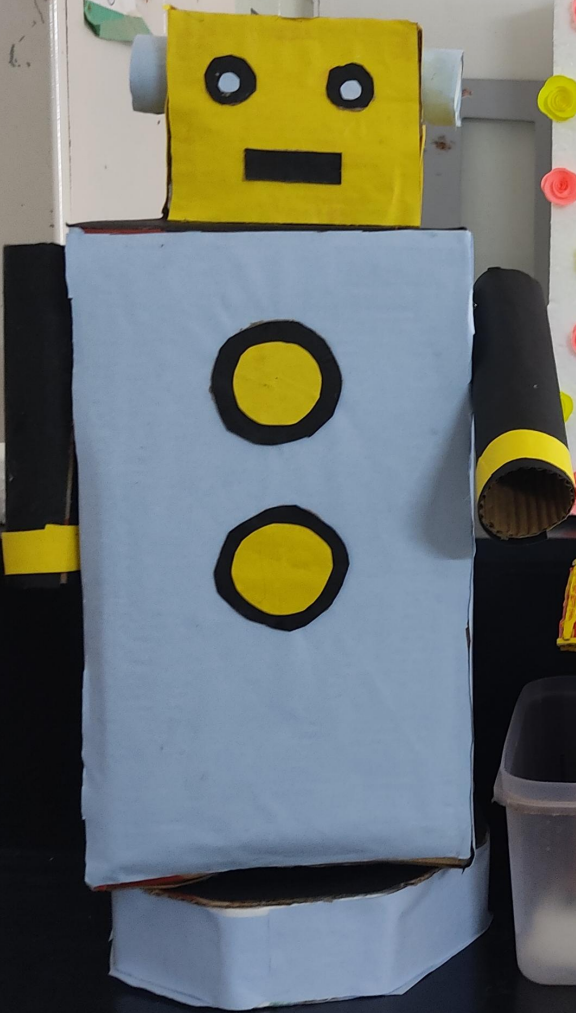


PHYSICS  
DEPARTMENT



NRDC (N) MMBD

**Robotics**

Robotics is a branch of Engineering and Computer Science that requires the conception, design, manufacture and operation of robots. The objective of the robotics field is to create intelligent machines that can assist humans in a variety of ways.

**father of robot in 16<sup>th</sup> century**  
*Leonardo da Vinci*

**father of robot in 20<sup>th</sup> century**  
*Joseph Engelberger*

**Mother of Robotics in 20<sup>th</sup> century**  
*Grace Hopper*

**PHYSICS DEPARTMENT**

**Father of robotics in India**  
 Manmohan Prasad Saha

**George Devol**  
 Inventor of the Palletizer

**Sophia (Robot)**

**FLOATING HOUSE**

**concept of floating**  
 An object floats when the weight force on the object is balanced by the upward push of the water on the object.

**Principle of floating**  
 An object will float in a liquid if its weight is less than the weight of the liquid displaced by it.

**Formulae of floating**  
 Buoyant force = Weight of displaced liquid

**Types of Robots**

- 1) Pre-programmed robots
- 2) Humanoid robots
- 3) Autonomously robots
- 4) Teleoperated robots
- 5) Augmenting robots

**1) Pre-programmed robots**  
 Pre-programmed robots are those that have to be told what to do and how they simply execute that program. They usually change their behavior when they are reprogrammed and are usually in a factory.

**2) Humanoid robots**  
 A humanoid robot is similar to a human body in shape. They usually have a professional driver inside. They are used for inspection and maintenance. They have two eyes, but they are not made of flesh or bones.

**DIP ART**

**Disadvantages of floating bodies**

- \* Risky to use
- \* Weather dependent
- \* High maintenance
- \* Less cost effective
- \* Less space efficient



**BOTANY DEPARTMENT**



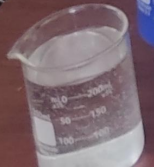
WELCOME  
You Belong

S-MALL  
STUDENT MALL



Dr. [Name]

SIST







**Robotics**

Robotics is a branch of engineering and computer science that involves the design, construction and operation of robots. The objective of the robotics field is to create intelligent machines that can assist humans in a variety of ways.

**Father of robot in 19th century**

**Father of robot in 20th century**

**Mother of Robotics in 20th century**

**PHYSICS DEPARTMENT**

**Father of robotics in India**

Professor when it comes to India, the title of father of robotics in India goes to Dr. Sankar Kulkarni. He is often known as 'Kulkarni' a professor, a researcher known for his pioneering work in robotics and automation.

**George Devol**

George Devol (1912-2012) was an American inventor, best known for creating the first industrial robot, Unimate. He is often referred to as the 'father of Robotics' in the United States. He filed his first patent for the first digitally controlled programmable robot arm in 1954, which was the modern robotic 'arm'.

**Sophia (Robot)**

She is the world's first social robot and the first robot to receive citizenship in the United States. She was created by Hanson Robotics, a company that specializes in creating human-like robots. She is a humanoid robot that can hold conversations, express emotions, and even perform on stage.

**FLOATING HOUSE**

**Concept of floating**

An object floats when the weight force on the object is balanced by the upward force of the water on the object.

**Principle of floating**

It can be said that an object floats when the weight of the object is equal to the weight of the liquid displaced by the object.

**Formula of floating**

$W = \rho \times V \times g$

where  $W$  is buoyant force,  $\rho$  is the weight of the liquid.

**Types of Robots**

- 1) Pre-programmed robots
- 2) Humanoid robots
- 3) Autonomously robots
- 4) Teleoperated robots
- 5) Augmenting robots

**1) Pre-programmed robots**

Pre-programmed robots are those that have to be told what to do and how to do it. They are often used in manufacturing and assembly lines.

**2) Humanoid robots**

A humanoid robot is similar to a human body in shape. They are often used in research and development, and in entertainment. They are also used in education and training.

**DIFF. AI & ROBOTICS**

**ARTIFICIAL INTELLIGENCE**

- It is a branch of computer science that deals with the creation of intelligent machines that can perform tasks that normally require human intelligence.
- It is the ability of a machine to learn from experience and solve problems.
- Applications of AI are found in many areas, including medicine, finance, and transportation.
- They usually operate in a computer-aided environment.
- They can be used to perform tasks that are difficult for humans to do.
- They can be used to create new products and services.
- They can be used to improve the efficiency of existing systems.
- They can be used to create new forms of entertainment.

**ROBOTICS**

- It is a branch of engineering and computer science that involves the design, construction and operation of robots.
- It is the ability of a machine to perform tasks that normally require human intelligence.
- Applications of robotics are found in many areas, including manufacturing, medicine, and space exploration.
- They are often used to perform tasks that are dangerous or difficult for humans to do.
- They can be used to create new products and services.
- They can be used to improve the efficiency of existing systems.
- They can be used to create new forms of entertainment.

**Advantages of floating building**

- \* Easy and affordable to construct
- \* Quick construction
- \* Cost effective
- \* Reduction in deforestation
- \* Less absorption to the ecosystem
- \* Pleasant appearance

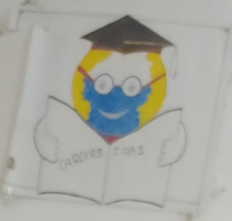
**Disadvantages of floating building**

- \* Risky in places where there is a high risk of flooding
- \* High maintenance cost
- \* Greater service life
- \* High water pollution in the area
- \* High risk from terrorism
- \* Need for skilled labor





FLOTTING HOUSE



BOT DEPT  
RAIN

T. THIRUPATHI



### Robotics

Robotics is a branch of Engineering and computer science that involves the conception, design, manufacture and operation of robots. The objective of the resulting field is to create intelligent machines that can assist humans in a variety of ways.

**father of robot in 12<sup>th</sup> century**

**father of robot in 20<sup>th</sup> century**

**Mother of Robotics in 20<sup>th</sup> century**

# PHYSICS DEPARTMENT

### Father of robotics in India

Concept when it comes to India the title of Father of Robotics in India goes to Dr. Sankar K. Gupta. He was one of the first Indian scientists to work on robotics and AI. He was also the first Indian to work on the concept of intelligent machines.

### FLOATING HOUSE

**Concept of floating**

An object floats when the weight force on the object is balanced by the upward push of the water on the object.

**Condition of floating**

1) The object must be completely or partially submerged in the liquid.

2) The weight of the object must be equal to the weight of the liquid displaced by the object.

**Archimedes' Principle**

When a body is wholly or partially submerged in a fluid, it experiences an upward force equal to the weight of the fluid displaced by it.

### Types of Robots

- 1) pre-programmed robots
- 2) Humanoid robots
- 3) Autonomous robots
- 4) Teleoperated robots
- 5) Augmenting robots
- 6) Pre-programmed robots

The pre-programmed robots are those that have been programmed to perform a specific task. They are often used in manufacturing and assembly lines.

Humanoid robots are designed to look and move like humans. They are used in research and development, and in entertainment.

Autonomous robots are able to perform tasks without human intervention. They are used in exploration, search and rescue, and in agriculture.

Teleoperated robots are controlled by a human operator. They are used in surgery, in space exploration, and in hazardous environments.

Augmenting robots are used to assist humans in performing tasks. They are used in manufacturing, in construction, and in agriculture.

Pre-programmed robots are those that have been programmed to perform a specific task. They are often used in manufacturing and assembly lines.

### DIFF. AI & Robotics

**ARTIFICIAL INTELLIGENCE**

Artificial Intelligence (AI) is the simulation of human intelligence in machines that are programmed to think like humans and solve problems. AI is a branch of computer science that aims to create machines that can think and learn like humans.

AI is used in a wide range of applications, including:
 

- 1) Natural Language Processing (NLP)
- 2) Computer Vision
- 3) Robotics
- 4) Expert Systems
- 5) Machine Learning
- 6) Data Mining
- 7) Recommendation Systems
- 8) Fraud Detection
- 9) Spam Filtering
- 10) Image Recognition
- 11) Speech Recognition
- 12) Sentiment Analysis
- 13) Text Classification
- 14) Sentiment Classification
- 15) Sentiment Classification
- 16) Sentiment Classification
- 17) Sentiment Classification
- 18) Sentiment Classification
- 19) Sentiment Classification
- 20) Sentiment Classification

**Robotics**

Robotics is a branch of Engineering and computer science that involves the conception, design, manufacture and operation of robots. The objective of the resulting field is to create intelligent machines that can assist humans in a variety of ways.





BIOHYDROGEN REACTORS



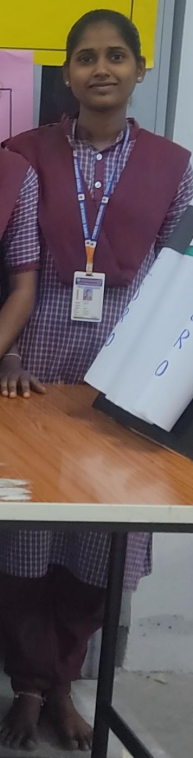
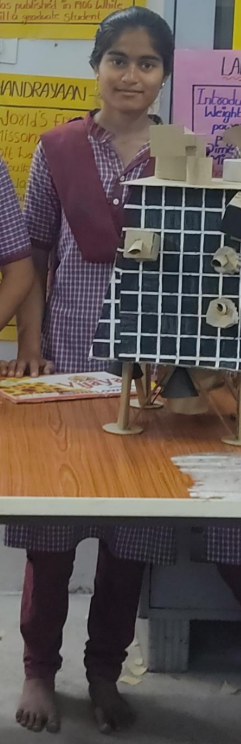
**MAITHRI**  
AQUATECH PVT LTD  
**MEGHDOOT**  
Atmospheric Water Generator





MAITHRI  
AQUATECH PVT LTD  
MEGHDOOT  
Atmospheric Water Generator





**CHANDRAYAN-1**  
**INTRODUCTION:**  
 Chandrayan-1 Moon Vehicle Was Launched  
 First Lunar probe  
 Launched on: October 22, 2008  
 From: Satish Dhawan Space Centre  
 Sriharikota  
 The Mission Included a Lunar Orbit and an Impactor  
 India Launched Space Craft Using a PSLV-XL Rocket  
 Serial Number C11  
 The Spacecraft Carries 11 Scientific Instruments (payloads) Built In India, USA, UK, Sweden and Bulgaria  
 The Vehicle Successfully Into Lunar Orbit on November 2008

**Curran Biography**  
 Name: P. V. Kurran  
 Place: 11, Lane, Kumbhari  
 Father Name: Chandrabhan Kurran  
 Mother Name: Premabai Kurran  
 Subjects: University of Madras  
 Grad. Model: 27/2/1926  
 Nobel prize in physics: 1930  
 Award: 1930, Madras in 1924  
 Died: 22, November 1970  
 → Kurran Effect Was an Important discovery in the field of Scattering of light  
 → On July 1930 on 22 February, Madras Science Day is celebrated in his tribute to the Nobel laureate Dr. P. V. Kurran  
 → His day came awareness 10 people about the importance of Science and Technology  
 → His First Research paper on Diffraction of light was published in 1926 while he was still a graduate student

**PHYSICS DEPARTMENT**  
**SCIENCE DAY**

**CHANDRAYAN-1**  
 • World's First Mission to the Moon  
 • Launched on 22 October 2008  
 • Carries 11 scientific instruments

**LANAR CV**  
 Length: 4111 kg  
 Weight: 3500 kg

Verification of Newton's first law  
 Verification of Newton's second law

WELCOME TO LIBRARY

Books and doors  
ARE THE SAME THING. THEY OPEN THEM, AND YOU GO THROUGH  
into another world.  
- JAMES HAMILTON

HUMAN LIBRARIAN'S DAY

The man who does  
not read books  
is like a man who does  
not have a soul.

LIBRARY RULES

THE FATHER OF LIBRARY SCIENCES IN INDIA

CHEMISTRY DEPARTMENT

PERIODIC







Application of Newton's first law

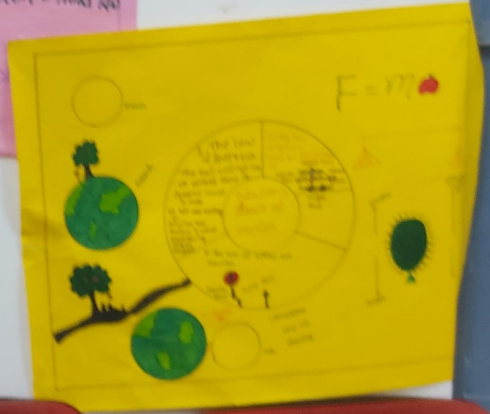
- A coin kept in the cup
- Car stops
- The branch of a tree from the branch part

Application of Newton's second law

- Kicking a ball
- capture the ball by hand
- push a car
- Delivery of tractor a car

Application of Newton's third law

- Tying of a roller
- A book lying on a table









**CHANDRAYAN-1**  
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 India Launched Space Craft  
 Using a PSLV-XL Rocket  
 Serial Number C11  
 The Spacecraft Carries 11  
 Scientific Instruments (payloads)  
 Built In India, USA, UK, Germany,  
 France and Bulgaria  
 The Spacecraft Successfully Inserted  
 Orbit on 8  
 2008

**C.V Raman Biography**  
 Name : C.V Raman  
 place : Tiruchirappalli  
 Father Name: Chandrasekhara  
 Muralidharan Iyer  
 Mother Name: parvathi Ammal  
 Studies : University Of Madras  
 Gold Medal : 1928 Feb 1928  
 Nobel prize in physics : 1930  
 Award : Bharat Ratna in 1954  
 Died : 21 November 1970  
 Raman Effect Was an Important  
 Discovery in the Field Of Scattering of Light  
 So Every year on 28<sup>th</sup> February Karnataka  
 Science Day is Celebrated to pay tribute  
 to the Nobel laureate Dr cv Raman  
 This day Create awareness to people  
 About the Importance of Science  
 And technology  
 His First Research paper on Diffraction  
 Of Light Was published in 1928 while  
 He was a Graduate Student

CGC  
**PHYSICS DEPARTMENT  
 SCIENCE  
 DAY**

**CHANDRAYAN-1**  
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 Orbiters and an Impactor  
 India Launched Space Craft  
 Using a PSLV-XL Rocket  
 Serial Number C11  
 The Spacecraft Carries 11  
 Scientific Instruments (payloads)  
 Built In India, USA, UK, Germany,  
 France and Bulgaria  
 The Spacecraft Successfully Inserted  
 Orbit on 8  
 2008

**CHANDRAYAN-2**  
 Chandrayaan-2, Moon Vehicle Was Launched  
 First Lunar probe  
 Launched on: October 19, 2019  
 From Satish Dhawan SHAR  
 Sriharikota  
 The Mission Included a Lunar  
 Orbiters and an Impactor  
 India Launched Space Craft  
 Using a GSLV-F12 Rocket  
 Serial Number M17  
 The Spacecraft Carries 11  
 Scientific Instruments (payloads)  
 Built In India, USA, UK, Germany,  
 France and Bulgaria  
 The Spacecraft Successfully Inserted  
 Orbit on 17  
 2019

**CHANDRAYAN-1**  
 Chandrayaan-1, Moon Vehicle Was Launched  
 First Lunar probe  
 Launched on: October 23, 2008  
 From Satish Dhawan SHAR  
 Sriharikota  
 The Mission Included a Lunar  
 Orbiters and an Impactor  
 India Launched Space Craft  
 Using a PSLV-XL Rocket  
 Serial Number C11  
 The Spacecraft Carries 11  
 Scientific Instruments (payloads)  
 Built In India, USA, UK, Germany,  
 France and Bulgaria  
 The Spacecraft Successfully Inserted  
 Orbit on 8  
 2008

