

WEEK 1

Sl.No.	Date	Topic	Assignment	Marks	Comments	Signature
1	22-8-24	1.1 What is a robot?	Q/A		filed	<i>Pooja</i>
2						
3		WEEK 2				
4	23-8-24	Robots	Q/A			<i>Pooja</i>
5		WEEK 3				
6	29-8-24	Robotics	C.W Worksheet			<i>Pooja</i>
7		WEEK 4				
8	6-9-24	1.5 Living with robots	Classworks			
9		WEEK 5				
10	12-9-24	1.5 Living with robots	Q/A			
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Academic Year 2024-2025
First Term-Tentative Syllabus VI

Subject: Computer Science

Sr.	Unit/Chapter/Lesson	Title/Topic
1.	Chapter 1	The nature of technology: Robots
2.	Chapter 5	Multimedia: Our school survey

Friday, 23rd August, 2024

Topic 1.1: What is a robot.

Q1 What is a robot?

Ans1 A robot is a machine built by people to do jobs. A robot must be programmed by a human to do its job. Once a robot is programmed, it does the job without human help.

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29/8

Topic 1.1: Introduction to Robots

Q1 Who is a roboticist??

Ans1 A roboticist is a person who designs, builds and works with robots. They are inventors who build / create machines that move and do jobs.

Q2 State the difference between humanoid and non-humanoid robots.

Ans2 Humanoid robots look like a human. They have a head, arms, legs and even a face. They carry day to day tasks like humans. However, non-humanoid robots don't look like people. They might look like animals, cars or even a machine with wheels and tools e.g. robot vacuum and a robot car.

Q3 Give 3 examples of monotonous jobs.

Ans3 The 3 examples are:

1. Packing boxes in a factory
2. Sorting letters or papers
3. Assembling the same car part over and over again.

Q4 What are collaborative robots.

Ans4 Collaborative robots or co-robots are robots that work alongside humans. They are made to help people in jobs, making work easier, safer.

Q5 Name any 2 robots sent to Mars.

Ans 6 The 2 robots sent to Mars are:

- Curiosity
- Perseverance ✓

Q 8 What is another name for space robots.

Ans 8 Another name for space robots is "space probes" or "rovers".

Q 7 State any 2 differences between humans robots.

- Robots are machines, and they don't have feelings however humans are living beings and have emotions.
- Robots do not get tired or mistakes while humans get tired and make mistakes.

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Cyan
29/4

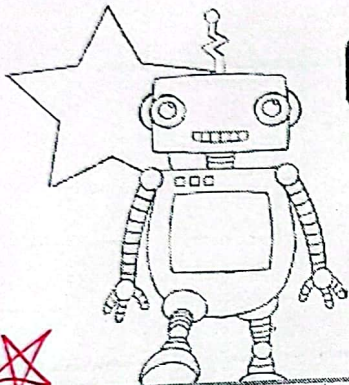
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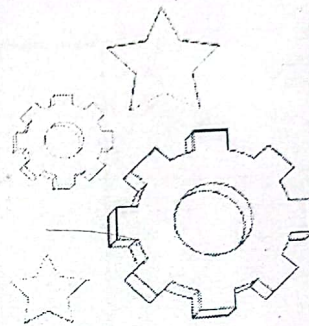
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Topic: Robotics

Grade VI



Design Your Own Robot



Use this grid to design and draw your own robot!

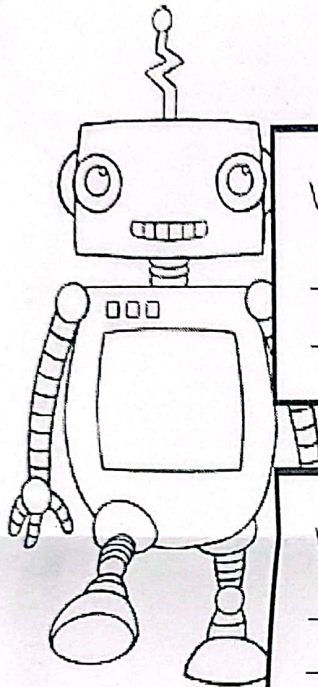
Handwritten red scribbles and a star.
29/9



Nikka

Design Your Own Robot

Response Sheet



What is your robot called?

Nikki ✓

What is your robot made out of?

Metal and wires ✓

What does your robot do?

It cleans the house, helps
me with studies. ✓
control harsh feelings

Where does your robot live?

In my home ✓

Topic 1.3: How Robots Work

Q1 List down the major components of a robot?

The components of the robot are:

- Sensors
- Actuators
- Controller

Qno2 What is the function of a controller in a robot?

A controller is the brain of the robot. The controller is programmed to do its job. A robot cannot think like a human. It carries out whatever instructions it has been programmed to do.

Qno3 What are actuators in a robot?

Robots do not have muscles and bones like humans. Actuators are the mechanical parts of a robot that helps it to move and lift objects. The actuators in a robot do the same job as the muscles in your arm.

Qno4 How is a proximity sensor different from pressure sensors?

Ans 4 A proximity sensor tells a robot how close an object is while a pressure sensor lets a robot know that it is touching something.

Qno5 What is the purpose of a vibration sensor in a robot

vaccum cleaner??

Ans 5 A vibration sensor tells the cleaner that the area needs more cleaning if a lot of dirt hits the sensor. ✓

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Ajay
12/7

Topic 1.5: Living with robots

Qno: How can we convert a normal home into a smart home.

Ans: To convert a normal home into a smart home we have to have smart devices in our homes. We can have heating and cooling systems installed. We can have alarm sensors and pressure sensors so any thief can be detected. Moreover we can install security and fire systems. All these smart devices are connected to the internet and are controlled by control systems. These devices make life easier and convenient.

✓

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12/9

Set desired temperature →

Controller
Turn cooling ON or OFF



Switch
ON/OFF



Air Conditioner



House kept at correct temperature

Feedback
What is house temperature



Topic 1.5: Living with robots

Qno1 What is the full form of SATNAV?

Ans1 The full form of SATNAV is "Satellite Navigation."

Qno2 Why are drones used in farms?

Drones are used to spray pesticides and fertilizers in the farms.

Qno3 Design a control loop for a cooling system.

*
Answered
12/9

Topic 1.5: Living with robots

Qnca How does a robot vacuum cleaner work?

Write in points.

Ans 1 A robot vacuum cleaner works like this:

- 1- A robot vacuum cleaner has a motor which makes it move around the house on wheels.
- 2- It has proximity sensors which measure the rooms to take the best route and they calculate distance between two things.
- 3- It has bumpers which detect if the vacuum has bumped into anything.
- 4- A robot vacuum cleaner has vibration sensors, if a lot of dirt hits the sensor it tells the vacuum that this area needs more cleaning.
- 5- It has a sensor to tell if the battery is low.