ARTIFICIAL INTELLIGENCE FOR ENGINEERING (KMC-101)

UNIT-1 : An Overview of AI

LECTURE-1

Content : The evolution of AI, what is AI.

Lecture Outcomes : Students will be able to know about AI history

1. **The evolution of Artificial Intelligence**

Before 1950	**Greek Mythology - Talos** Talos was a gaint animated bronze warrior programmed to guard the island of crete created by Hephaestus.
1950	**Alan Turing** Alan Turing published a landmark paper in which he speculated about the possibility of creating machines that think.
1951	**Game AI** Christopher Strachey wrote a checkers program and Dietrich Prinz wrote one for chess.
1956	**The birth of AI** John McCarthy first coined the term "Artificial Intelligence" in 1956 at the Dartmouth Conference

1959	**First AI Laboratory** MIT AI Lab was first setup in 1959. The research on AI began.
1960	**General Motors Robot** First robot was introduced to General Mo- assembly line.
1961	**First Chatbot** The first chatbot called ELIZA was introduced in 1961.
1997	**IBM Deep Blue** IBM's Deep Blue beats world champion Garry Kasparov in the game of chess.
2005	**DARPA Grand Challenge** Stanford Racing Team's autonomous robotic car. Stanley wins the 2005 DARPA Grand challenge.
2011	**IBM Watson** IBM's question answering system, watson. defeated the two greatest Jeopardy! champions. Brad Ruter and Ken Jennings.

2. What is Artificial Intelligence :

John McCarthy first coined the term Artificial Intelligence in the year 1956.

John McCarthy defined Artificial Intelligence as the science and engineering of making intelligent machines.

"The theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making and translation between languages."

or

AI is an emerging branch in computer science, which interprets the means and method of making computers think like human beings. Artificial Intelligence is the simulation of human intelligence by machines.

- The ability to solve problems.
- The ability to act rationally.
- The ability to act like humans.

Definition of artificial Intelligence according to eight textbooks are shown in figure. These definitions vary along two main dimensions. Roughly, the ones on top are concerned with thought processes and reasoning, whereas the ones on the ~~top~~ bottom address behaviour. The definitions on the left measures success in terms of fidelity to human performance, whereas the ones on the right measure against an ideal concept of intelligence, which we will call rationality.