**UNIT I :**

**Introduction:** What is AI, the foundations of AI, The state of the art Chapter I AI Textbook

**Intelligent agents:** Agents and environments, good behaviour, concept of rationality, nature of environments, structure of agents. Chapter 2 AI Textbook 03

**Problem-solving:** Problem-solving agents, Example problems, Searching for Solutions, Uninformed Search Strategies: Breadth First search, Depth First Search. Chapter 3 AI Textbook.

**Q) Define AI. Describe the organization of AI Definition.**

John McCarthy in mid-1950’scoined the term ―Artificial Intelligence‖ which he would define as ―the science and engineering of making intelligent machines‖ AI is about teaching the machines to learn, to act, and think as humans would do. We can organize AI definition into 4 categories:

• The definitions on top are concerned with thought processes and reasoning, whereas the ones on the bottom address behaviour.

• The definitions on the left measure success in terms of conformity to human performance whereas the ones on the right measure against an ideal performance measure called rationality.

• A system is rational if it does the "right thing," given what it knows.

• Historically, all four approaches to AI have been followed, each by different people with different methods.

• A human-cantered approach must be in part an empirical science, involving observations and hypotheses about human behaviour.

• A rationalist’s approach involves a combination of mathematics and engineering. The various groups have both disparaged and helped each other. Let us look at the four approaches in more detail.

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| **Thinking Humanly**  ―The exciting new effort to make computers think machines with minds, in the full and literal sense. (Haugeland, 1985)  ― [The automation of] activities that we associate with human thinking, activities such as decision-making, problem solving, learning. (Bellman, 1978) | **Thinking Rationally**  ―The study of mental faculties through the use of computational models. (Charniak and McDermott, 1985)  ―The study of the computations that make it possible to perceive, reason, and act.‖(Winston, 1992) |
| **Acting Humanly**  ―The art of creating machines that perform functions that require intelligence when performed by people. (Kurzweil,1990)  ―The study of how to make computers do things at which, at the moment, people are better. (Rich and Knight, 1991) | **Acting Rationally**  ―Computational Intelligence is the study of the design of intelligent agents. (Pooleet al., 1998)  ―AI is concerned with intelligent behaviour in artifacts. (Nilsson, 1998 |