**QUESTION 1**

**COMPARE AND CONTRAST ARTIFICIAL INTELLIGENT AND AUGMENTED INTELLIGENT**

Artificial Intelligence (AI) and Augmented Intelligence (AuI) are related but distinct concepts in the field of intelligent systems. Here’s a comparison:

| **Feature** | **Artificial Intelligence (AI)** | **Augmented Intelligence (AuI)** |
| --- | --- | --- |
| **Definition** | AI refers to machines that can simulate human intelligence, including learning, reasoning, and decision-making. | AuI enhances human intelligence by leveraging AI tools to support decision-making rather than replacing humans. |
| **Goal** | Seeks to create autonomous systems capable of functioning without human intervention. | Aims to assist and enhance human capabilities rather than replace them. |
| **Human Involvement** | Minimal or none in fully autonomous AI systems. | High—humans remain central to the decision-making process. |
| **Example Applications** | Self-driving cars, AI chatbots, automated trading systems. | Decision-support tools in medicine, AI-powered analytics in business. |
| **Approach** | Focuses on replacing human cognition with machine intelligence. | Works alongside humans to improve efficiency and accuracy. |
| **Risk Factors** | Job displacement, ethical concerns about autonomy, potential bias in decision-making. | Reduces risks by keeping humans in control, ensuring ethical oversight. |

**QUESTION 2**

**THE IS HISTORY OF ARTIFICIAL INTELLIGENCE FROM 1940'S TILL DATE**

**1940s – 1950s: Foundations of AI**

* **1943**: Warren McCulloch & Walter Pitts developed the first mathematical model of an artificial neuron, laying the groundwork for neural networks.
* **1950**: Alan Turing introduced the **Turing Test** in his paper *"Computing Machinery and Intelligence"*, proposing a way to measure machine intelligence.
* **1951**: Christopher Strachey developed the first AI program, a checkers-playing algorithm, on the Ferranti Mark I computer.
* **1956**: The **Dartmouth Conference**, organized by John McCarthy, officially introduced the term **"Artificial Intelligence"**, marking the birth of AI as a field.

**1960s – 1970s: The Rise and Fall of AI (Early AI Boom & AI Winter)**

* **1965**: Joseph Weizenbaum developed **ELIZA**, an early natural language processing (NLP) chatbot that mimicked human conversations.
* **1966**: The first AI-powered robot, **Shakey the Robot**, was developed at Stanford Research Institute
* **1970s**: AI faced its first **"AI Winter"**, a period of reduced funding and interest due to high expectations not being met.
* **1979**: The first autonomous vehicle, **Stanford Cart**, successfully navigated a room on its own.

**1980s – 1990s: Expert Systems & Machine Learning Revival**

* **1980s**: AI experienced a resurgence with **expert systems**, which used knowledge-based rules to solve complex problems (e.g., MYCIN for medical diagnosis).
* **1986**: Geoffrey Hinton and others revived neural networks by developing **backpropagation**, making deep learning more effective.
* **1997**: IBM’s **Deep Blue** defeated world chess champion **Garry Kasparov**, showcasing AI’s potential in strategic thinking.

**2000s – 2010s: The Rise of Big Data & Deep Learning**

* **2006**: Geoffrey Hinton coined the term **"Deep Learning"**, marking a shift toward using deep neural networks for AI advancements.
* **2011**: IBM’s **Watson** AI won the quiz show *Jeopardy!*, demonstrating AI's capability in NLP and knowledge retrieval.
* **2012**: The **ImageNet Challenge** saw a breakthrough in AI when **AlexNet** (a deep learning model) significantly outperformed previous models in image recognition.
* **2014**: Google’s **DeepMind** developed **AlphaGo**, which defeated human players in the complex board game **Go**.
* **2016**: AlphaGo defeated world champion **Lee Sedol**, proving AI’s superiority in strategic problem-solving.

**2020s – Present: Generative AI & Advanced AI Systems**

* **2020**: AI played a critical role in the COVID-19 pandemic, helping in vaccine research and medical diagnostics.
* **2021**: OpenAI launched **DALL·E**, an AI model capable of generating realistic images from text descriptions.
* **2022**: **ChatGPT** (powered by GPT-3.5) revolutionized conversational AI, followed by **GPT-4** in 2023, improving reasoning and natural language understanding.
* **2023–2024**: AI systems became more integrated into everyday applications, including coding assistants, legal document analysis, and autonomous vehicles.

**Future Trends in AI**

* **Autonomous AI agents**: AI systems that can perform complex tasks without human intervention.
* **Artificial General Intelligence (AGI)**: AI that can think and reason like humans.
* **Ethical AI & Regulations**: Governments and organizations are focusing on AI ethics and regulation to ensure responsible AI development.