The quiz will cover a broad range of topics in Artificial Intelligence, including:

- **AI concepts, history, and practical applications.**

- **Current trends, ethical considerations, and social impacts of AI.**

Sample questions:

1. AI Concepts, History, and Practical Applications

- **Basic Concepts:**

1. **Question**: What does "AI" stand for, and how is it generally defined?

   - **Answer**: "Artificial Intelligence," the simulation of human intelligence in machines.

2. **Question**: Which subfield of AI focuses on algorithms that improve over time based on experience?

   - **Answer**: Machine Learning.

3. **Question**: What is a neural network, and why is it important in AI?

   - **Answer**: A neural network is a series of algorithms that attempts to recognize underlying relationships in a set of data through a process that mimics the way the human brain operates. It's fundamental for deep learning tasks.

2. **History of AI:**

1. **Question**: Who is often called the "Father of Artificial Intelligence" and organized the first AI conference in 1956?

   - **Answer**: John McCarthy.

2. **Question**: In which year did IBM's Deep Blue defeat chess champion Garry Kasparov, marking a milestone in AI?

   - **Answer**: 1997.

3. **Question**: What was the name of the AI system that defeated human champions on the quiz show *Jeopardy!*?

   - **Answer**: IBM Watson.

3.Practical Applications of AI:

1. **Question**: Which AI application is widely used by e-commerce websites to suggest products to customers based on their browsing history?

   - **Answer**: Recommendation System.

2. **Question**: Name an AI technology that can identify faces in photos and videos, commonly used in security and social media tagging.

   - **Answer**: Facial Recognition.

3. **Question**: What AI technique allows virtual assistants like Siri and Alexa to understand and respond to spoken commands?

   - **Answer**: Natural Language Processing (NLP).

2. Current Trends, Ethical Considerations, and Social Impacts of AI

- **Current Trends in AI:**

  1. **Question**: What is the term for AI models that generate new content, such as images or text, that resembles real-world data?

     - **Answer**: Generative AI.

  2. **Question**: What type of learning model has gained popularity for tasks where AI agents learn through rewards and penalties by interacting with an environment?

     - **Answer**: Reinforcement Learning.

  3. **Question**: Quantum computing is predicted to transform AI. How does quantum computing differ from traditional computing?

     - **Answer**: Quantum computing uses quantum bits (qubits) that can exist in multiple states simultaneously, potentially solving complex problems much faster than traditional binary computing.

- **Ethical Considerations in AI:**

  1. Which term describes a situation where an AI system unfairly disadvantages certain groups of people?
     - **Answer**: b) Algorithmic Bias
  2. What is the primary ethical concern when AI systems are not easily understandable or interpretable?
     - **Answer**: a) Transparency
  3. The principle of 'AI Explainability' ensures that AI systems are:
     - **Answer**: b) Transparent and understandable

  4. What is the ethical principle called that emphasizes AI's transparency, accountability, and ability to explain its decisions?

     - **Answer**: AI Explainability.

- **Social Impacts of AI:**

  1. The term 'digital divide' refers to:

     - **Answer**: The disparity in access to technology

  2. Which of the following is a potential negative impact of AI on employment?

     - **Answer**: Increase in automation of repetitive tasks

  3. Using AI for surveillance may lead to which major concern?

     - **Answer**: Privacy invasion and reduced autonomy