**Read the Passage and answer the questions provided below;**

Artificial intelligence (AI) is a rapidly evolving field that encompasses a wide range of technologies and applications. It refers to the development of computer systems capable of performing tasks that typically require human intelligence, such as visual perception, speech recognition, and decision-making. AI has the potential to revolutionize various industries and transform the way we live and work.

One of the significant advancements in AI is machine learning, a branch of AI that focuses on enabling computers to learn and improve from experience without explicit programming. Machine learning algorithms analyse vast amounts of data, identify patterns, and make predictions or decisions based on those patterns. This capability has led to breakthroughs in areas such as natural language processing, computer vision, and autonomous vehicles.

Another important concept in AI is deep learning, a subset of machine learning that mimics the structure and functioning of the human brain's neural networks. Deep learning algorithms are composed of multiple layers of interconnected nodes, or artificial neurons, which process information and extract meaningful features. This approach has revolutionized tasks like image and speech recognition, enabling machines to achieve human-level performance in certain domains.

While AI holds immense potential, it also presents challenges and ethical considerations. One challenge is the need for large amounts of high-quality data to train AI systems effectively. Without sufficient data, AI algorithms may struggle to generalize and make accurate predictions. Additionally, concerns about data privacy and security arise, as AI systems often deal with sensitive information.

Ethical considerations in AI revolve around issues like bias, transparency, and accountability. AI algorithms can unintentionally perpetuate biases present in the data they are trained on, leading to discriminatory outcomes. Ensuring transparency in AI decision-making processes is crucial, especially in critical domains like healthcare and finance. Moreover, accountability becomes complex when AI systems make autonomous decisions with far-reaching consequences.

In conclusion, artificial intelligence is a rapidly evolving field that holds great promise but also poses challenges. Machine learning and deep learning are driving significant advancements, enabling computers to perform complex tasks. However, the ethical implications and the need for high-quality data are important considerations in the development and deployment of AI technologies.

1. What is the primary goal of artificial intelligence (AI)?
2. What is the difference between machine learning and deep learning?
3. How does machine learning enable computers to make predictions or decisions?
4. What are the potential benefits of deep learning in AI?
5. How can biases be inadvertently perpetuated in AI algorithms?
6. Why is transparency important in AI decision-making processes?
7. What are some applications of AI in critical domains?
8. What are the ethical considerations associated with AI?