

## **QUESTION-1**

**ANS:**

Machine learning is like teaching a computer to learn from data, so it can make decisions or predictions on new data without being explicitly programmed to do so. For example, let's say we want to build a spam filter for our email. We could use machine learning algorithms to analyze the content of emails and identify patterns that distinguish spam from non-spam emails. Then, we could use this knowledge to automatically filter incoming emails.

On the other hand, artificial intelligence is about creating machines that can perform tasks that usually require human intelligence, such as reasoning, learning, perception, and decision making. For example, self-driving cars are a form of AI that can navigate through traffic, interpret road signs and signals, and make decisions based on their surroundings, just like a human driver would.

On a broad level, we can differentiate both AI and ML as:

*"AI is a bigger concept to create intelligent machines that can simulate human thinking capability and behavior, whereas, machine learning is an application or subset of AI that allows machines to learn from data without being programmed explicitly."*

## QUESTION-2

**ANS:**

| <b>Artificial Intelligence</b>  | <b>Machine learning</b>   |
|---|---|
| Artificial intelligence enables a machine to simulate human-like behavior.  | Machine learning is a subset of AI which allows a machine to automatically learn from past data without programming explicitly.                   |
| AI has a very wide range of scope.  | Machine learning has a limited scope.   |
| AI is working to create an intelligent system which can perform various complex tasks.  | Machine learning is working to create machines that can perform only those specific tasks for which they are trained.                             |
| AI systems are concerned about maximizing the chances of success.   | Machine learning is mainly concerned about accuracy and patterns.   |
| The main applications of AI are Siri, customer support using chatbots, Expert System, Online game playing, intelligent humanoid robot, etc. | The main applications of machine learning are Online recommender system, Google search algorithms, Facebook auto friend tagging suggestions, etc. |
| On the basis of capabilities, AI can be divided into three types, which are, Weak AI, General AI, and Strong AI.                            | Machine learning can also be divided into mainly three types that are Supervised learning, Unsupervised learning, and Reinforcement learning.     |
| It includes learning, reasoning, and self-correction.   | It includes learning and self-correction when introduced with new data.   |
| AI completely deals with Structured, semi-structured, and unstructured data.  | Machine learning deals with Structured and semi-structured data.  |

### **QUESTION-3**

**ANS:**

I think AI will not be able to completely replace human intelligence in the future.

AI is not capable of replacing human intelligence entirely. Though AI can perform specific tasks better and faster than humans, it lacks the creativity, emotional intelligence, and common sense that humans possess.

AI is excellent at processing and analyzing large amounts of data, but it still requires human oversight to ensure its decisions are ethical and fair. Additionally, there are certain tasks that AI cannot perform, such as artistic expression, humor, and empathy. Therefore, it is unlikely that AI will completely replace human intelligence in the future. Instead, AI will continue to complement and enhance human intelligence in various industries, making our lives easier and more efficient.