**Q1. What is Machine Learning?**  
Machine Learning is a subset of AI where systems learn from data to make predictions or decisions.  
It allows models to improve performance over time without being explicitly programmed.

**Q2. What are the 3 basic Types of Machine Learning?**

1. Supervised Learning – learns from labelled data.
2. Unsupervised Learning – finds patterns in unlabelled data.
3. Reinforcement Learning – learns through trial and error using rewards.

**Q3. What is Supervised Learning?**  
Supervised Learning uses labelled datasets to train models to predict outcomes.  
The algorithm learns the mapping between input features and output labels.

**Q4. What are the applications of Supervised Learning?**  
Spam email detection, fraud detection, stock price prediction, and medical diagnosis.  
It is widely used in industries like finance, healthcare, and e-commerce.

**Q5. What is classification and regression?**  
Classification predicts categories or labels (e.g., spam or not spam).  
Regression predicts continuous values (e.g., house price or temperature).

**Q6. Give some applications of classification algorithms.**  
Email spam filtering, image recognition, disease diagnosis, and sentiment analysis.  
These models sort data into predefined classes or categories.

**Q7. Give some applications of regression algorithms.**  
Used in forecasting, trend analysis, and predicting numerical outcomes.  
Examples include predicting sales, prices, and demand over time.