**1.** AI is the simulation of human intelligence processes by machines, especially computer systems.

It has the ability to perform the toughest tasks which can't be done by humans.

Example applications: Face recognition

Natural language processing

Speech recognition

**2.**

| Supervised Learning | Unsupervised Learning |
|---|---|
| It uses labelled data as input. | It uses unlabelled data as input. |
| It has less computational complexity. | It has high computational complexity. |
| Here the number of classes are known. | Number of classes are unknown. |
| Desired output will be given. | Desired output won't be given. |

**3.** Python is a dynamic, high-level, free open source, and interpreted programming language.

It supports both object-oriented and procedural-oriented programming.

**Features:**

Free and open source.

Easy to code.

Easy to Read.

Object-oriented language.

**Advantages:**

Since it is dynamically typed no need to declare the data type.

Wide range of libraries and frameworks.

Portability.

**4.** A great library ecosystem.

Flexibility.

Readability.

Good visualization options.

**5.** Indentation refers to the spaces at the beginning of a code line.

In other programming languages the indentation in code is for readability only, whereas in python indentation is used to indicate a block of code.

Without proper indentation it gives an indentation error.

**6.Variable:** It is reserved memory location to store values.

Example: x, Var, fruits etc..

**7.Keywords:**

Keywords are specific reserved words which has a specific feature associated with it.

It always starts with a lowercase letter.

It must contain only alphabets.

Ex: int, char, if, while.

**Identifiers:**

Identifiers are values used to define different programming items such as variables, integers etc.

First character can be uppercase or lowercase or underscore.

It can consist of either alphabets or numeric values or underscore.

Ex: Test, count1 etc.

**8.** Basic datatypes in python:

Numeric

Sequence

Boolean

Set

Dictionary

**9.** Syntax for if statement in python:

if condition:

    #statements to execute if

    #condition is true

**10.** "elif" keyword in python stands for "else if".

It can be used in conditional statements to check for multiple conditions.