1.define artificial intelligence: technology that enables computers and digital devices to learn, read, write, create.

examples:

1. machine learning

2.natural language processing.

3.computer vision.

4.robotics.

5.deep learning.

2.Difference between supervised and unsupervised learning are two main categories of machine learning techniques, each with distinct characteristics and purposes.

supervised: mode of training with labelled data

1.Regression

Unsupervised: mod of training with unlabelled data

1.Clustering

3.what is python?

Python is a high-level, interpreted programming language known for its simplicity, readability, and versatility

FEATURES AND ADVANTAGES

1.Readablility and Simplicity

2.Dynamic Typing

3.Extensive Standard Library

4.Platform Independent

5.Verstility

4.What are the advantages of using python as a programming language for AI and ML?

Python is widely regarded as one of the best programming languages for artificial intelligence and machine learning.

ADVANTAGES:

1.Rich ecosystem of libraries

2.Support of data handling

3.Flexibility and interoperability

4.Community and Support

5.Importance of indentation in python?

which states the block of statements or code as it is a part of syntax

as in other languages we use curly brackets in python indentation to denote the code.

1.code debugging

2.syntax requirement

3.Avoid ambiguity

4.block structure

6.Define a variable with examples for valid variable names?

Variables are used to store and manipulate data.

examples:

ex1:

```
age=23
print(age)
 # integer variable
```

ex2:

```
height=1.56
print(height)
# float variable
```

ex3:

```
name="vishnu"
print(name)
# string variable
```

etc...

7.Difference between keyword and an identifier?

keywords and identifiers are fundamental concepts

1. keywords are reserved words in a programming language that have special meanings and used to define the structure and logic of a program.

ex:

if, else, for, while, class etc.

identifiers:

identifiers are user define names given to various program elements such as variables, functions, classes, etc.

They are used to represent data or code elements and help make the program more readable

ex:

calculate area, employee

There are some rules for identifiers.

8.List the basic datatype in python?

There are several datatypes are available in python.

they are:

1.integer

2.float

3.string

4.boolean

5.list

6.tuple

7.dictionary

8.set

9.Describe the syntax for if statement in python?

if statement in python which allows to execute a block of statement with a specific condition

syntax:

```
if condition
    statement1
    statement2
    ....
```

the statement begins with if keyword

if the condition is true the statement will execute and if false then the code block will skip.

10.Explain the purpose of elif statement in python?

else if which indicates the alternative for if statement for multiple conditions in a sequence

which is clear and more readable

1.sequencial condition checking

2.efficiency

3.avoiding multiple if statements.