Assesment

① Define Artificial Intelligence (AI) and provide examples of its applications.

Artifical intelligence is a branch of computer science that deals with creating intelligence machines that can think and work like humans.

Applications of AI with Examples

Healthcare: Artical intelligence is widely used in the field of healthcare and madicine.

Social media: some Social media platform such as facebook instagram, etc uses artificial intelligence to show relevant content to the user.

Agriculture: In agriculture AI has helped farmers identify areas that need irrigation, fertilization, pesticide treatments or increasing yield...

② Differentiate between supervised and unsupervised learning techniques in ML.

Supervised learning	unsupervised. learning
⇒ Algorithms are trained using labeled data.	Algorithms are used. against data that is not labeled.

Simpler method	computationally Complex.
Highly accurate	less accurate
Desired output is given	Desired output is not given.

③ What is python? Discuss its main features and advantages.

⟹ Python is an interpreted, interactive, object oriented programming language.

features :-
⟹ Easy to code.
⟹ open source.
⟹ portable
⟹ Extensible.

Advantages.
⟹ Reduces maintenance cost
⟹ Avoid the Harm of Software Bugs
⟹ Easy memory management.
⟹ Integration with other Languages.

④ what are the advantages of using Python as a programming language of AI and ML?

⟹ python is the major code language for AI and ML.

Advantages

1) A great library ecosystem, Good
⟹ Good visualization options.
⟹ community support.
2) flexibility.
> And platform independence.

⑤ Discuss the importance of indentation in Python code.

⟹ The primary purpose of it indentation in Python is to define the scope of statements, such as those within loops, conditionals, functions, and clauses.

```
a = 10
    if a < 0:
        print ("negative number")
    else
        a == 0:
        print ("zero")
    ele:
        print (" positive number").
```

⑥ Define a variable in python provide
examples of valid variable names:

⇒A python variable is a reserved memory.
location to store values.

&ₓ. a=10

name = "sharvani"

A· = 21

⑦ Explain the difference between a keyword and
an identifier in python

keyword	Identifier
Keywords are the reser-ved words witha special meaning.	Identifiers are the user-defined names of variables functions, etc.
⇒they are written in lower case	⇒ Need not be written in lowercas.
⇒contains only letters	→ contains letters. undersource. and digits.

⑧ List the basic data type available
in python.

i) Numeric
  - integer
  - float
  - complex
ii) sequence
  - string
  - touple
  - list
iii) mapping
  - dictonary
iv) boolean
v) sets.

⑨ Describe the syntax for an if statement in Python.

(a=10

=> The if $a \neq \neq)$ statement allows you to execute a book of code if a certain condition is true.

$a=10$
if $a == 10$:
print("a is equal to 10")

⑩ Explain the purpose of the elif statement. in python.

The elif statement statement allows you to check multiple expressions for True and execute a block of code as soon as one of the conditions evaluates to True.

```
Ex:  age = 18
     if (age age < 18):
         print ('Age is less than 18')
     elseif (age ==18):
         print ('Age is equal to 18')
     else :
         print('Age is greater than 18')
```