Higher Secondary (Vocational)
CLASS XI
Semester - 1
Introduction to AI/ML

Time Allowed: 45 Mins   **Full Marks: 20**

A. Choose the correct alternative from the following

i) Which of the following is NOT a feature of Python that makes it significant in AI and Machine Learning?
   a) Extensive Libraries and Frameworks
   b) Interpreted and High-Level Language
   c) Lack of Community Support
   d) Cross-Platform Compatibility

ii) Why is Python considered a versatile programming language?
   a) It supports only web development
   b) It has a complex syntax
   c) It can be used for multiple purposes like web development, data analysis, AI, and ML
   d) It is exclusive to AI and ML applications

iii) What is the first step in setting up a Python environment for data science and interactive coding using Anaconda?
   a) Installing Jupyter Notebook directly from the Python website
   b) Downloading and installing the Anaconda distribution, which includes Python and Jupyter Notebook
   c) Writing Python scripts in a text editor
   d) Installing Python packages using pip

iv) Which of the following is not a reserved keyword in Python?
   a) break
   b) True
   c) yield
   d) start

v) Which of the following has a constant value?
   a) variable
   b) literal
   c) string
   d) identifier

vi) Which operator is used to find the remainder on dividing two operands?
    a) %
    b) /
    c) //
    d) **

vii) If a = 14, what is the value of a << 3 in Python?
    a) 124
    b) 112
    c) 64
    d) 14

viii) In Python, what determines the structure of code blocks, such as those in loops or functions?
    a) Semicolons
    b) Brackets
    c) Indentation
    d) Commas

ix) What is the output for the following Python code?

```
x = 10
if x > 5:
        print("Greater")
else:
        print("Smaller or Equal")
```

    a) Greater
    b) Smaller or Equal
    c) Error
    d) Nothing

x) What is the output for the following Python code?

```
a = 25
b = 12
   if a >= b:
            print("Yes")
   else:
            print("No")
```

    a) Error   b) Yes
    c) No   d) None of these

xi) What is the output for the following Python code?

```
for i in range (3) :
        print( i )
```

a) 1 2 3　　　　　　　　　　　　b) 0 1 2 3
c) 0 1 2　　　　　　　　　　　　d) None of these

xii) What is the output for the following Python code?

```
for x in range (1, 9, 3) :
        print( x, end = ' , ' )
```

a) Error　　　　　　　　　　　　b) 1,2,3,4,5,6,7,8
c) 1,4,7,10　　　　　　　　　　　d) 1,4,7

xiii) What keyword is used in Python to define a function?
a) func
b) def
c) define
d) lambda

xiv) Which statement is used to import a specific function from a module in Python?
a) import function from module
b) from module import function
c) import module.function
d) function import from module

xv) Which of the following is a built-in Python module?
a) os
b) data
c) file
d) maths

xvi) Which of the following operations is NOT allowed on a Python list?
a) Indexing to access elements
b) Slicing to obtain a subset of elements
c) Modifying an element by its index
d) Assigning a new value to a slice of the list

xvii) What is the primary characteristic of a Python tuple that differentiates it from a list?
a) It can hold only numeric values
b) It is immutable, meaning its elements cannot be changed after creation
c) It supports duplicate values

d) It allows elements to be added or removed dynamically

xviii) Which of the following best describes a Python dictionary?
a) A collection of unique elements in no particular order
b) A sequence of elements that can be indexed and sliced
c) A collection of key-value pairs where each key is unique
d) A mutable, ordered collection of elements

xix) Which statement is used in Python to automatically manage the opening and closing of a file?
a) try-except
b) open-close
c) with
d) import

xx) What will happen if an error occurs while trying to open a file that doesn't exist, and it is not handled with a try-except block?
a) The program will continue without any issues
b) The program will crash with a FileNotFoundError
c) The file will be created automatically
d) The program will skip the file operation

ANSWER KEY

1	c	2	c	3	b	4	d	5	b
6	a	7	b	8	c	9	a	10	b
11	c	12	d	13	b	14	b	15	a
16	d	17	b	18	c	19	c	20	b