

SOE.

KATHMANDU UNIVERSITY  
End Semester Examination  
March, 2024

Marks Scored:

Level : BHI

Year : I

Exam Roll No. :

Time: 30 mins.

Course : HIMS 101

Semester : I

F. M. : 10

Registration No.:

Date 2:0 MAR 2025

SECTION "A"

[20 Q. × 0.5 = 10 marks]

Select and encircle the best alternative for each of the questions.

- Which of the following is **not** a characteristic of good algorithm?  
a. Input                      b. Unambiguous              c. Definiteness              d. Infinity
- Python is known as \_\_\_\_\_ language.  
a. machine                      b. interpreted                      c. compiled                      d. assembly
- What is Python primarily used for?  
a. Video editing              b. Web browsing              c. Data analysis              d. Gaming
- Find the invalid variable among the following:  
a. 1st\_string                      b. my\_string\_1                      c. \_string                      d. string
- The value of the Python expression  $4+2**5//10$  would be \_\_\_\_\_.  
a. 0                                      b. 3                                      c. 7                                      d. 77
- Which of the following precedence order is **correct** in Python?  
a. Multiplication, Division, Addition, Subtraction, Parentheses, Exponential  
b. Parentheses, Exponential, Multiplication, Division, Addition, Subtraction  
c. Division, Multiplication, Addition, Subtraction, Parentheses, Exponential  
d. Exponential, Parentheses, Multiplication, Division, Addition, Subtraction
- Which of the followings are correct about tuples and lists in Python?  
a. Lists are enclosed in brackets ([ ]) while tuples are enclosed in parentheses (( )).  
b. Lists elements and size can be changed while tuples elements cannot be updated.  
c. Lists are mutable whereas tuple are immutable.  
d. All of the above.
- What will be the output of the following Python code?  

```
t = (1, 2, 4, 3, 8, 9)
for i in range(0, len(t), 2)
    print(t[i])
```

  
a. [1, 2, 4, 3, 8]              b. [1, 2, 4, 3, 8, 9]              c. [1, 4, 8]                      d. [2, 3, 9]

9. In order to store values in terms of key and value we use what core data type.  
 a. List                      b. Tuple                      c. Set                      d. Dictionary
10. Which of the following is used to define a block of code in Python language?  
 a. Indentation              b. Brackets              c. Key                      d. None
11. In a Python program, a control structure:  
 b. Manages the input and output of control characters.  
 c. Directs the order of execution of the statements in the program.  
 d. Dictates what happens before the program starts and after it terminates  
 e. Defines program-specific data structures
12. What will be the output of the following python code?  

```

a = 10;
if a>7;
    print("Hello")
print("Bye")

```

 a. Hello                      b. Bye                      c. Hello Bye              d. Error
13. Repetition of a set of statements in a program is made possible using \_\_\_\_\_ Construct.  
 a. Sequential              b. Selection              c. Looping              d. None
14. What will be the output of the following Python code?  

```

i = 2
while True:
    if i%3 == 0:
        break
    print(i)
    i += 2

```

 a. 2 4 6 8 10 ...              b. 2 4                      c. 2 3                      d. error
15. What is a recursive function?  
 a. A function that calls to itself.                      b. A function that calls other function.  
 c. Both a and b                      d. None of the above
16. What will be the output of the following Python code?  

```

def display(b, n):
    while n > 0:
        print(b, end="")
        n=n-1
    display('z',3)

```

 a. zz                      b. zzz                      c. Infinite Loop              d. Exception
17. What is the purpose of the '**rb**' mode in file opening?  
 a. Read binary              b. Rename binary              c. Replace binary              d. Backup

20 MAR 2025

18. What is the output of the following code snippet if there isn't such file?
- ```
open("data.txt", "r")
content = file.read()
print(content)
```
- a. Prints the content of "data.txt"                      b. Raises a FileNotFoundError  
c. Raises a PermissionError                              d. Prints "None"
19. Which of the following is not an advantage of using modules?
- a. Provides a means of reuse of program code  
b. Provides a means of dividing up tasks  
c. Provides a means of reducing the size of the program  
d. Provides a means of testing individual parts of the program
20. What does pip stand for python?
- a. Pip Installs Python                                      b. Pip Installs Packages  
c. Preferred Installer Program                              d. All of the mentioned

KATHMANDU UNIVERSITY  
End Semester Examination  
March, 2025

SOE

Level : BHI  
Year : I  
Time : 2 hrs. 30 mins.

Course : HIMS 101  
Semester : I  
F. M. : 40

20 MAR 2025

SECTION "B"

[6 Q. × 4 = 24 marks]

Attempt *ANY SIX* question.

1. Define Algorithm. Write an algorithm and draw a flowchart of a program to display the largest among the three inputted numbers.
2. Explain about the need for learning python programming and its importance.
3. Write short notes on types of operators in python with appropriate example.
4. Describe if-else statement with syntax and flowchart. Write a python program to read a number and check if it is odd and divisible by 5 or not.
5. List the functional differences between while and for loops. Write a Python program that prints multiplication table of a given number.
6. What is a file? Why do we need to implement the concept of file in program? Discuss in brief the different types of text file opening modes?
7. Write short notes on:
  - a. Numpy
  - b. Pandas

SECTION "C"

[2 Q. × 8 = 16 marks]

Attempt *ANY TWO* question.

8. What are Python lists? Describe few methods that are used in Python list. What is range () function and how it is used in lists? [1 + 4 + 3]
9. What is an Exception? Explain about the different types of Exceptions in Python. Illustrate exception handling mechanism using try ... except along with suitable example. [1 + 4 + 3]
10. Discuss the types of user defined function? Write a python program to check whether the inputted number is Prime or not using the concept of user-defined function. Write any 2 differences between local variable and global variable in Python. [4 + 2 + 2]