

A. Revision of Python – 1

1. Which of the following is a valid Python identifier?

- a) 2value
- b) value_2
- c) value-2
- d) class

2. Which data type is immutable?

- a) List
- b) Dictionary
- c) Tuple
- d) Set

3. What is the output of `10 // 3`?

- a) 3.33
- b) 3
- c) 1
- d) 4

4. What is the output of `10 % 3`?

- a) 0
- b) 1
- c) 3
- d) 3.33

5. Which operator is used for exponentiation?

- a) ^
- b) **
- c) //
- d) %%

6. What is the output of `2 ** 3`?

- a) 5
- b) 6
- c) 8
- d) 9

7. Which function is used to find the length of a sequence?

- a) `length()`
- b) `count()`
- c) `len()`
- d) `size()`

8. What is the output of `len("COMPUTER")`?

- a) 7

- b) 8
- c) 9
- d) 10

9. Which of the following creates an empty list?

- a) {}
- b) []
- c) ()
- d) <>

10. Which operator is used to check equality?

- a) =
- b) ==
- c) !=
- d) ===

11. What is the output of `print(5 > 3 and 2 < 1)`?

- a) True
- b) False
- c) 1
- d) Error

12 Which of the following is a valid Python identifier?

- (a) 2value
- (b) class
- (c) total_marks
- (d) total-marks

13 What will be the output of the following code?

`print(10 // 3)`

- (a) 3.33
- (b) 3
- (c) 4
- (d) 1

14 Which data type is returned by the expression `type(5.0)`?

- (a) int
- (b) float
- (c) str
- (d) bool

15 What is the purpose of the `len()` function in Python?

16 What will be the output of: `print("Python"[1:4])`?

- (a) Pyt
- (b) yth
- (c) tho
- (d) Pyth

17 Which operator is used for exponentiation in Python?

- (a) ^
- (b) **
- (c) //
- (d) %%

18 State whether True or False: A tuple is mutable in Python.

19 What will be the output of: `print(7 % 3)`?

20 Which keyword is used to define a function in Python?

- (a) function
- (b) define
- (c) def
- (d) fun

21 What is the difference between a parameter and an argument in a function?

22 Which statement is used to send a value back from a function?

- (a) break
- (b) return
- (c) pass
- (d) yield

23 What will be printed?

```
def test():
```

```
    return 25
```

```
print(test())
```

- (a) test
- (b) 25
- (c) None
- (d) Error

- 24 What is a local variable?
- 25 Which file mode is used to open a text file for reading?
(a) w (b) a (c) r (d) x
- 26 Which function is used to open a file in Python?
(a) file() (b) open() (c) fopen() (d) read()
- 27 What is the purpose of the close() method while working with files?
- 28 Which method reads the complete contents of a text file as a single string?
(a) read() (b) readline() (c) readlines() (d) get()
- 29 What does the file mode 'a' indicate?
(a) append (b) access (c) array (d) automatic
- 30 What is the output of: print(3 > 2 and 5 < 4)?
(a) True (b) False (c) 1 (d) Error
- 31 Write the output: print ([1, 2, 3] + [4, 5]).

IMP QUESTION

- 1 Write a Python program to accept a number and check whether it is even or odd using a user-defined function.

OR

Write a Python function is_even(n) that returns True if n is even and False otherwise.

Consider the following code:

```
def calculate(a, b=5):
```

```
    return a * b
```

```
print(calculate(4))
```

```
print(calculate(4, 3))
```

Answer the following:

- (i) What is the output of the program?
- (ii) Identify the default argument.
- (iii) What happens when calculate(4, 3) is called?

- 2 Write a Python program to read all the contents of a text file 'story.txt' and count the number of lines present in the file.

OR

- 3 Write a Python program to read 'story.txt' and count the number of words present in the file.

- 4 Write a Python program to accept a string and perform the following operations:

- (i) Count the number of vowels.
- (ii) Count the number of consonants.
- (iii) Display the string in reverse order.

- 5 Use appropriate Python functions/methods.

OR

- 6 Write a Python program to accept a list of numbers and find the largest and smallest numbers using user-defined functions.

- 7 Write a Python program to create a text file named 'student.txt' and write the names of five students into it. Then read the file and display all the names.

- 8 Explain the concept of function arguments. Describe positional arguments, default arguments and keyword arguments with suitable Python examples.

9 A file 'notes.txt' contains multiple lines of text. Write a Python program to:

- (i) Read the file line by line.
- (ii) Display only those lines that contain the word 'Python'.
- (iii) Count and display the number of such lines.

10 Write a Python program to append three new lines to an existing file 'notes.txt' and then display the complete contents of the file.

11 A text file 'paragraph.txt' contains a paragraph. Write a Python program to read the file and perform the following tasks:

- (i) Display the complete paragraph.
- (ii) Count and display the total number of words.
- (iii) Count and display the total number of lines.
- (iv) Count and display the number of times the word 'Python' occurs (case-sensitive).
- (v) Display the longest word in the paragraph.

12 Write a Python program to read a text file 'data.txt' and create another file 'copy.txt' containing the same contents. Also display the number of characters copied.

13 Write a Python program using user-defined functions to maintain student marks. The program should:

- (i) Accept the student's name and marks in three subjects.
- (ii) Calculate total marks using a function.
- (iii) Calculate percentage using a function.
- (iv) Display the grade using a function according to the percentage: A for 80 and above, B for 60–79, C for 40–59, and D below 40.
- (v) Display the complete result.

14 Write a Python program using functions to accept a number and determine whether it is a prime number, a palindrome number, or both. Display the appropriate result.