

Karpaga Vinayaka Final year Easy Level Multiple Choice Questions (MCQs)

Operators

1. Which operator is used to add two numbers in Python?

- A) *
- B) -
- C) +
- D) /
- Answer: C

2. What is the result of the expression `5 % 2`?

- A) 0
- B) 1
- C) 2
- D) 3
- Answer: B

3. Which of the following operators is used for exponentiation in Python?

- A) ^
- B)
- C) *
- D) %
- Answer: B

4. What is the result of `4 // 3` in Python?

- A) 1
- B) 1.3333
- C) 0
- D) 4
- Answer: A

5. Which operator is used to check equality in Python?

- A) =
- B) ==
- C) !=
- D) >
- Answer: B

Data Types

6. Which data type is used to store text in Python?

- A) int
- B) float
- C) str
- D) bool
- Answer: C

7. What is the data type of `True` and `False` in Python?

- A) int
- B) float
- C) str
- D) bool
- Answer: D

8. Which of the following is a mutable data type in Python?

- A) tuple
- B) list
- C) str
- D) int
- Answer: B

9. What is the data type of `3.14` in Python?

- A) int
- B) float
- C) str
- D) bool
- Answer: B

10. Which data type would you use to store the number of students in a class?

- A) int
- B) float
- C) str
- D) bool
- Answer: A

Conditional Statements

11. Which keyword is used for conditional statements in Python?

- A) if
- B) for
- C) while
- D) def
- Answer: A

12. What is the correct syntax to check if a variable `a` is greater than 10?

- A) if a > 10:
- B) if (a > 10)
- C) if a > 10
- D) if (a > 10):
- Answer: A

13. Which statement is used to execute a block of code if a specified condition is false?

- A) if

- B) elif
- C) else
- D) switch
- Answer: C

14. What is the output of the following code?

```
if 5 > 3:  
    print("Yes")  
else:  
    print("No")
```

- A) Yes
- B) No
- C) Error
- D) None
- Answer: A

15. Which keyword is used to execute a block of code when the condition is not met?

- A) if
- B) else
- C) elif
- D) for
- Answer: B

Loops

16. Which keyword is used to create a loop in Python?

- A) if
- B) while
- C) def

- D) break
- Answer: B

17. What is the output of the following code?

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

- A) 0 1 2
- B) 1 2 3
- C) 0 1 2 3
- D) 1 2
- Answer: A

18. How many times will the following loop execute?

```
count = 0  
while count < 5:  
    count += 1
```

- A) 4
- B) 5
- C) 6
- D) Infinite
- Answer: B

19. Which keyword is used to stop a loop?

- A) stop
- B) break
- C) end
- D) halt

- Answer: B

20. What is the correct syntax for a for loop in Python?

- A) for (i = 0; i < 5; i++)

- B) for i in range(5):

- C) for i < 5:

- D) for (i < 5)

- Answer: B

Functions

21. Which keyword is used to define a function in Python?

- A) func

- B) def

- C) function

- D) define

- Answer: B

22. What will be the output of the following code?

```
def greet():  
    print("Hello")  
greet()
```

- A) greet

- B) "Hello"

- C) None

- D) Error

- Answer: B

23. Which of the following is a correct function definition?

- A) `def add(a, b): return a + b`
- B) `def add(a b) return a + b`
- C) `def add(a, b) return a + b`
- D) `def add(a, b): return (a + b)`
- Answer: A

24. What is the purpose of a return statement in a function?

- A) To return a value to the caller
- B) To end the function execution
- C) To print a value
- D) Both A and B
- Answer: D

25. Which of the following is an example of a function call?

- A) `def func():`
- B) `return func()`
- C) `func()`
- D) `define func():`
- Answer: C

Classes

26. Which keyword is used to define a class in Python?

- A) `class`
- B) `def`
- C) `struct`
- D) `object`
- Answer: A

27. What is the output of the following code?

```
class Dog:
    def __init__(self, name):
        self.name = name
```

```
dog = Dog("Buddy")
print(dog.name)
```

- A) Dog
- B) Buddy
- C) Error
- D) None
- Answer: B

28. Which of the following statements is true about classes and objects in Python?

- A) Classes are instances of objects
- B) Objects are blueprints of classes
- C) Classes are blueprints of objects
- D) None of the above
- Answer: C

29. Which method is called when an object is created in Python?

- A) __init__()
- B) __start__()
- C) __create__()
- D) __new__()
- Answer: A

30. How do you create an instance of a class in Python?

- A) class MyClass():
- B) MyClass()
- C) def MyClass():

- D) instance MyClass()

- Answer: B

Karpaga Vinayaka Final year Medium Level Multiple Choice Questions (MCQs)

Operators

1. What will be the output of the following code?

```
x = 10
y = 20
x += y - x * y
print(x)
```

- A) 10

- B) -190

- C) 200

- D) -180

- Answer: B

2. Which of the following statements is true about the expression `not (a and b)`?

- A) It is equivalent to `not a or not b`

- B) It is equivalent to `not a and not b`

- C) It is equivalent to `a and b`

- D) It is equivalent to `a or b`

- Answer: A

3. What will be the output of the following code?

```
a = 5
b = 3
print(a b // a % b)
```

- A) 1
- B) 2
- C) 3
- D) 4
- Answer: B

4. Which of the following operators cannot be used with strings in Python?

- A) +
- B) *
- C) /
- D) in
- Answer: C

5. What is the output of the following code?

```
print(10 / 3)  
print(10 // 3)
```

- A) 3.3333 and 3
- B) 3 and 3.3333
- C) 3.0 and 3.0
- D) 3.3333 and 3.0
- Answer: A

Data Types

6. Which method is used to convert a list to a tuple in Python?

- A) ``list()``
- B) ``tuple()``
- C) ``convert()``

- D) ``transform()``

- Answer: B

7. What will be the output of the following code?

```
s = "Hello, World!"
```

```
print(s[7:])
```

- A) ``World!``

- B) ``Hello``

- C) ``Hello,``

- D) `` , World!``

- Answer: A

8. Which of the following data types is not iterable in Python?

- A) list

- B) dict

- C) int

- D) str

- Answer: C

9. What is the output of the following code?

```
l = [1, 2, 3]
```

```
l.append([4, 5])
```

```
print(l)
```

- A) ``[1, 2, 3, 4, 5]``

- B) ``[1, 2, 3, [4, 5]]``

- C) ``[1, 2, 3, 4]``

- D) ``[1, 2, 3, [4, 5], 5]``

- Answer: B

10. Which of the following methods can be used to convert a string to lowercase in Python?

- A) `str.lower()`
- B) `str.downcase()`
- C) `str.low()`
- D) `str.lowercase()`

- Answer: A

Conditional Statements

11. What will be the output of the following code?

```
x = 10
if x > 5:
    print("x is greater than 5")
elif x == 10:
    print("x is 10")
else:
    print("x is less than 5")
```

- A) `x is greater than 5`
- B) `x is 10`
- C) `x is less than 5`
- D) `x is greater than 5` and `x is 10`

- Answer: A

12. Which of the following is the correct way to check if a variable `x` is between 10 and 20 in Python?

- A) `if x >= 10 or x <= 20:`
- B) `if 10 <= x <= 20:`

- C) `if x >= 10 and x <= 20:`
- D) `if 10 >= x >= 20:`
- Answer: B

13. What is the output of the following code?

```
x = 5
if x > 10:
    print("A")
else:
    if x > 0:
        print("B")
    else:
        print("C")
```

- A) `A`
- B) `B`
- C) `C`
- D) `None`
- Answer: B

14. Which of the following is an example of a nested if statement?

- A) `if x > 5 and x < 10:`
- B) `if x > 5: if x < 10:`
- C) `if x > 5: elif x < 10:`
- D) `if x > 5: else if x < 10:`
- Answer: B

15. What is the output of the following code?

```
x = 10
```

```
if x > 5:
    if x == 10:
        print("Yes")
    else:
        print("No")
else:
    print("Maybe")
```

- A) `Yes`
- B) `No`
- C) `Maybe`
- D) `None`
- Answer: A

Loops

16. What will be the output of the following code?

```
for i in range(1, 5):
    print(i, end=' ')
```

- A) `1 2 3 4`
- B) `1 2 3 4 5`
- C) `0 1 2 3 4`
- D) `2 3 4 5`
- Answer: A

17. Which statement is used to skip the current iteration of a loop and proceed to the next iteration?

- A) `break`
- B) `continue`
- C) `pass`

- D) `skip`
- Answer: B

18. What will be the output of the following code?

```
for i in range(3):  
    for j in range(2):  
        print(i, j)
```

- A) `0 1 2`
- B) `0 1`
- C) `0 0 0 1 1 0 1 1 2 0 2 1`
- D) `0 0 0 1 1 0 1 1`
- Answer: D

19. What is the output of the following code?

```
count = 0  
while count < 3:  
    count += 1  
    print("Looping")
```

- A) Looping
- B) Looping Looping
- C) Looping Looping Looping
- D) Looping Looping Looping Looping
- Answer: C

20. Which loop would you use to iterate over the keys in a dictionary?

- A) for loop
- B) while loop

- C) do-while loop
- D) foreach loop
- Answer: A

Functions

21. What is the output of the following code?

```
def multiply(a, b=2):  
    return a * b
```

```
print(multiply(3))
```

- A) 3
- B) 6
- C) 9
- D) Error
- Answer: B

22. Which of the following is true about functions in Python?

- A) A function can have multiple return statements
- B) A function cannot return multiple values
- C) A function cannot have default arguments
- D) A function cannot be called recursively
- Answer: A

23. What will be the output of the following code?

```
def func(x):  
    x = x + 1  
    return x
```



```
x = 10
```

```
print(func(x))
```

- A) 10
- B) 11
- C) Error
- D) None
- Answer: B

24. What is the scope of a variable defined inside a function?

- A) Local
- B) Global
- C) Both local and global
- D) None of the above
- Answer: A

Karpaga Vinayaka Final year Hard Level Multiple Choice Questions (MCQs)

Operators

1. What will be the output of the following code?

```
```python
a = 5
b = 10
c = 15
result = a < b == c
print(result)
```
```

- A) True
- B) False

- C) Syntax Error
- D) None
- Answer: B

Data Types

2. What will be the output of the following code?

```
```python
s = "Python"
print(s[1:4] + s[-3:])
```
```

- A) `ythn`
- B) `ythhon`
- C) `ython`
- D) `ytho`
- Answer: D

Conditional Statements

3. What will be the output of the following code?

```
```python
x = 7
if x > 10:
 print("Greater than 10")
elif x > 5:
 print("Greater than 5 but less than or equal to 10")
elif x > 2:
 print("Greater than 2 but less than or equal to 5")
else:
 print("2 or less")
```
```

- A) `Greater than 10`
- B) `Greater than 5 but less than or equal to 10`
- C) `Greater than 2 but less than or equal to 5`
- D) `2 or less`
- Answer: B

Loops

4. What will be the output of the following code?

```
```python
numbers = [1, 2, 3, 4, 5]
for i in range(len(numbers)):
 numbers[i] = numbers[i] * 2
print(numbers)
```
```

- A) `[1, 2, 3, 4, 5]`
- B) `[2, 4, 6, 8, 10]`
- C) `[2, 4, 6, 8]`
- D) `Error`
- Answer: B

Functions

5. What will be the output of the following code?

```
```python
def outer():
 x = "local"
 def inner():
 nonlocal x
 x = "nonlocal"
 print("inner:", x)
```

```
inner()
print("outer:", x)
```

```
outer()
```

```
...
```

- A) `inner: local` `outer: local`
- B) `inner: nonlocal` `outer: local`
- C) `inner: nonlocal` `outer: nonlocal`
- D) `Error`
- Answer: C

## Classes

6. What will be the output of the following code?

```
```python
```

```
class A:
```

```
    def __init__(self):
        self.count = 0
```

```
    def increment(self):
        self.count += 1
```

```
class B(A):
```

```
    def increment(self):
        self.count += 2
```

```
obj = B()
```

```
obj.increment()
```

```
print(obj.count)
```

```
...
```

- A) 0

- B) 1
- C) 2
- D) 3
- Answer: C

Problem 1 - Write a Python class BankAccount that has attributes name, address, account_number and balance, and methods to deposit and withdraw money, and create a text file under individual account no and track all the deposit and withdrawal.

Problem 2 - Write a Python function to read a text file and return a dictionary where the keys are the words and the values are the counts of how often each word appears in the file.

Problem 3 - Write a generator function that yields the first n prime numbers.