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- 1. Which one of the following is a valid python if statement?
  - a. if a>=2:
  - b. if (a>=2)
  - c. if(a=>22)
  - d. if a >= 22

Ans: a. if a>=2:

**Explanation:** The Python syntax for the if statement has a colon (:) at the end of the condition. Parentheses around the conditions are optional.

- 2. Which of the following is not a decision -making statement?
  - a. if-elif statement
  - b. for statement
  - c. if-else statement
  - d. if statement

Ans: b. for statement

**Explanation:** for statement is not a decision- making statement. It is a loop structure.

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3. What does the following code print to console?

if True: print (1001) else:

print (2002)

a. 1001

b. true

c. 2002

d. False

Ans: a. 1001

**Explanation:** The condition is 'True', which is a boolean constant. This condition will always be true.

- 4. What keyword would you use to add an alternative condition to an if statement?
  - a. else if
  - b. elseif
  - c. elif
  - d. None of the above

Ans: c. elif

Explanation: 'elif' gives an alternative / another condition if the first condition fails.

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- 5. What is the use of if statement in Python?
  - a. To define a function
  - b. To control the flow of the program based on conditions
  - c. To perform mathematical calculations
  - d. To create a loop

Ans: b. To control the flow of the program based on conditions

**Explanation:** Based on the condition some statements are allowed to be executed and some are skipped.

- 6. How do you denote the beginning and end of a code block inside an if statement in python?
  - a. Curly braces {}
  - b. Parentheses ()
  - c. Square brackets []
  - d. Indentation

Ans: d. Indentation

**Explanation:** Only indentation indicates the beginning and end of a code block in Python. The beginning of a code block is marked by an increase in indentation, and the end of the

code block is marked by a decrease in indentation.

- 7. How many elif can you include in a single if statement?
  - a. Only one
  - b. As many as needed
  - c. Two at most
  - d. Three at most

Ans: b. As many as needed

**Explanation:** There should be only one 'if' statement and one or zero 'else' statements. But the structure can have as many elif statements as needed.

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- 8. What is the use of the else statement in Python?
  - a. To execute a block of code if a condition is met
  - b. To define a new condition
  - c. To execute a block of code if none of the preceding conditions are met
  - d. To terminate the program

Ans: c. To execute a block of code if none of the preceding conditions are met

**Explanation:** The else block is executed only if none of the preceding if or elif conditions are true. It works like a default statement when none of the specified conditions match.

- 9. In an if-elif-else statement, what happens if the condition is True?
  - a. The if block is executed, and the rest of the statements are skipped.
  - b. The if block is skipped, and the elif block is executed.
  - c. The if block and all subsequent elif blocks are executed.
  - d. The if block and the else block are executed.

Ans: a. The if block is executed, and the rest of the statements are skipped.

**Explanation:** When the if condition is True, the if block is executed and the control is moved out of the if structure to the next executable statement after the if structure.

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## 10. Find the result of the following code?

x = 2

v = 5

if x > y:

print ("x is greater than y")

- a. x is greater
- b. x is less than or equal to 3
- c. No Result
- d. None of the above

#### Ans: c. No Result

**Explanation:** There is no else block defined in this code. Therefore, there won't be any output. When the if condition fails the condition is moved out of the if structure to the next executable statement after the if structure.

- 11. What is the purpose of using the elif statement instead of multiple if statements?
  - a. elif statements allow you to check multiple conditions in a single block.
  - b. elif statements are more efficient.
  - c. elif statements can be nested within other if statements.
  - d. There is no difference; you can use either elif or multiple if statements.

Ans: a. elif statements allow you to check multiple conditions in a single block.

**Explanation:** In case of the multiple if statements all the conditions will be checked even if one condition becomes True. elif statement which is part of an if structure, eliminates the repeated checking.

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- 12. Which keyword is used to start an if statement?
  - a. when
  - b. for
  - c. if
  - d. case

Ans: c. if

**Explanation:** An if statement begins with the keyword 'if'.

- 13. What happens if none of the conditions in an if-elif chain is True, and there is no else block?
  - a. The program raises an error.
  - b. The program executes the first if block.
  - c. The program executes the last elif block.
  - d. The program does nothing and continues to the next statement.

Ans: d. The program does nothing and continues to the next statement.

**Explanation:** When none of the conditions in an if-else chain is True, and there is no else block, control is transferred out of the if structure to the first executable statement immediately after the if structure in the program.

- 14. In an if-elif-else statement, is it necessary to have an else block?
  - a. Yes, an else block is required.
  - b. No, an else block is optional.
  - c. An else block is required only if there are multiple elif blocks.
  - d. An else block is required only if the if block is present.

Ans: b. No, an else block is optional.

**Explanation:** Else block is optional. If included, it improves the clarity of the program.

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## 15. Find the output of the following code?

```
a = b = True
if (a and b):
    print ("Most Welcome")
else:
    print("Welcome")
```

- a. Most Welcome
- b. Welcome
- c. Both a. & b.
- d. None of the above

Ans: a. Most Welcome

**Explanation:** Statement a = b = True, assigns True to variables both a and b. When they are compared the result is True. Therefore, the true block in this if structure is executed.

16. Find the output of the following code?

```
x = 3
if x>2 or x<5:
    print("True")
else:
    print("False")</pre>
```

- a. True
- b. False
- c. No Result
- d. None of the above

Ans: a. True

**Explanation:** There are two conditions in the if statement and they are combined by the logical operator 'or'. This expression will return True even if one condition is True or both the conditions are True. Here, both the conditions are True. Therefore, the result is True.

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- 17. How do you check for multiple conditions in a single if statement?
  - a. Using the and keyword
  - b. Using the or keyword
  - c. Using commas to separate conditions
  - d. Both a and b

Ans: d. Both a and b

**Explanation:** To check for multiple conditions in a single if statement, you can use either: The 'and' keyword to combine conditions, where all conditions must be true. The or keyword to combine conditions, where at least one condition must be true.

- 18. How would you write an if statement that executes when x is not equal to 10?
  - a. if x! = 10:
  - b. if x = !10:
  - c. if x <> 10:
  - d. if x not 10:

Ans: a. if x! = 10:

**Explanation:** The '! =' operator is used in Python to check if two values are not equal.

- 19. How do you write a one-line if statement in Python?
  - a. if x > 10: print(x) else None
  - b. print(x) if x > 10 else None
  - c. print(x) where x > 10
  - d. (print x) if x > 10

Ans: b. print(x) if x > 10 else None

**Explanation:** Python allows one-line if statements, where the action is before the condition, separated by 'if'.

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- 20. Can an if statement contain only an else clause without elif?
  - a. Yes
  - b. No
  - c. Only inside a function
  - d. Only if there is no code in the else clause

Ans: a. Yes

**Explanation:** An if statement can have an else clause without an elif. Both elif and else are optional.

- 21. Which keyword allows you to check if a condition is false in an if statement?
  - a. not
  - b. false
  - c. invert
  - d. negate

Ans: a. not

**Explanation:** The 'not' keyword is used to check if a condition is false.

- 22. When an if condition is false, which section is executed?
  - a. do-while
  - b. while
  - c. else
  - d. for

Ans: else

**Explanation:** The else block executes if the if condition is false.

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23	Can the if and else block be left blank?	(without any	v statements or 'n	ass' statement
<b>_</b> J.	dan the in and else block be left blank.	( Without and	y statements of p	ass statement

- a. Yes
- b. No
- c. some times
- d. None of the above

Ans: b. No

**Explanation:** Both the if and the else blocks cannot be left blank. They can have pass statements.

- 24. Which statement will check if a is equal to b?
  - a. if a = b:
  - b. if a == b:
  - c. if a === c:
  - d. if a == b

Ans: b. if a == b:

**Explanation:** Conditional operator '==' is used to check for the equality between two objects. A '=' is an assignment operator.

- 25. elif can be considered to be an abbreviation of \_\_\_\_\_\_
  - a. nested if
  - b. if...else
  - c. else if
  - d. if...elif

Ans: c. else if

**Explanation:** In python the 'else if' key word is replaced with an 'elif' keyword.

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26. Which statement is	generally use	ed as a p	laceholder?
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- a. continue
- b. break
- c. pass
- d. goto

Ans: c. pass

**Explanation:** The pass statement is a null operation. i.e., it does nothing. It is used as a placeholder in a loop or in an if condition. It is used as a placeholder where syntactically some code is required, but no action is desired or needed

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- a. Arithmetic or Relational expression
- b. Arithmetic or Logical expression
- c. Relational or Logical expression
- d. Arithmetic

Ans: c. Relational or Logical expression

**Explanation:** A condition is formed using relational or logical expressions. Relational operators are to find the comparison between two values. Logical operators are used for combining two or more relational expressions (and & or) and negate values(not).

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28.	Python	executes	one	statement	after	another	from	beginning	to	the	end	of	the
ı	orogram.	This is a _		•									

- a. Selection Construct
- b. Sequential Construct
- c. Iteration Construct
- d. None of the above

**Ans: b. Sequential Construct** 

**Explanation:** Python executes the statements in a program in the order of their appearance from top to bottom in a sequential manner.

- 29. The order of execution of the statements in a program is known as \_\_\_\_\_
  - a. Flow of control
  - b. Central flow
  - c. Selection
  - d. Iteration

Ans: a. Flow of control

**Explanation:** Flow of control is the sequential execution of the statements in a Python program from top to bottom or in the order of their appearance.

- 30. How many conditions can be used with a single if statement?
  - a. One
  - b. Two
  - c. Four
  - d. Multiple

Ans: d. Multiple

**Explanation:** If there are more than one condition, they are combined using the logical operators. The logical operators and & or are used for this purpose.

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- 31. How many statements can be written in an if block?
  - a. 2
  - b. 4
  - c. 6
  - d. Any number

Ans: d. Any number

**Explanation:** Python allows any number of statements inside an if block.

- 32. What is used to indent the code block within an if statement in Python?
  - a. Only tabs
  - b. Only spaces
  - c. Either tabs or spaces
  - d. No indentation is required

Ans: c. Either tabs or spaces

**Explanation**: Statements that will execute when condition is TRUE are placed after a tab or some space. This indicates the beginning of a new block, the if block in this case.

- 33. How is an "if-else" statement different from an "if" statement?
  - a. "if-else" has two conditions, while "if" has only one
  - b. "if-else" has a block of code that executes when the condition is true, and another block for false
  - c. "if" can only check for equality, while "if-else" can handle inequalities
  - d. There is no difference; they can be used interchangeably

Ans: b. "if-else" has a block of code that executes when the condition is true, and another block for false

**Explanation:** "if-else" provides an alternative block of code to execute when the condition is false. This improves the program logic and understandability.

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- 34. What is the purpose of indentation in Python if-else statements?
  - a. It is optional and does not affect the code
  - b. It is used for comments
  - c. It defines the scope of the code blocks
  - d. It is a syntax error

Ans: c. It defines the scope of the code blocks

**Explanation:** Indentation indicates the scope of code blocks. It marks the beginning and the end of a block. The beginning of a code block is marked by an increase in indentation, and the end of the code block is marked by a decrease in indentation.

35. What will be the output of the following code snippet?

x = 10
if x > 5:
 print ("Greater than 5")
else:
 print ("5 or less")

- a. Greater than 5
- b. 5 or less
- c. Both
- d. None of the above

Ans: a. Greater than 5

**Explanation:** The value of x is 10, which is greater than 5, so the condition is True. When the condition in the if structure is True the if block is executed.

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- 36. How do you write an if-else statement to check if a number is even or odd?
  - a. if num % 2 = 0:
  - b. if num % 2 == 0:
  - c. if num % 2:
  - d. if num / 2 == 0:

#### Ans: b. if num % 2 == 0:

**Explanation:** The modulus operator (%) is used to check whether a division operation gives a remainder. If it gives a 0, it means that the number is an even number.

- 37. In Python, what will happen if there is no "else" block after an "if" block?
  - a. It will result in a syntax error
  - b. The program will terminate
  - c. The "if" block will be ignored
  - d. It will still run without issues

#### Ans: d. It will still run without issues

**Explanation:** An "else" block is optional; if it is not present, the program will continue executing the next statement after the "if" block. If the if condition results in a false, it will not be notified to the user.

- 38. What is the purpose of the "elif" statement in Python?
  - a. To declare a variable
  - b. To handle multiple conditions
  - c. To exit the program
  - d. To print to the console

#### Ans: b. To handle multiple conditions

**Explanation:** "elif" allows you to have multiple conditions in an if structure after the first "if" statement.

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# 39. What is the value of "result" in the following code?

x = 5

result = "Even" if x % 2 == 0 else "Odd"

- a. Even
- b. Odd
- c. 5
- d. Error

Ans: b. Odd

**Explanation:** The ternary operator is used here to assign "Even" if the condition is true, and "Odd" if it's false. Here the condition returns False and 'Odd' gets printed.

- 40. What is the role of the "pass" statement in Python?
  - a. It is a placeholder indicating no action
  - b. It terminates the program
  - c. It prints a message to the console
  - d. It skips the next iteration of a loop

Ans: a. It is a placeholder indicating no action

**Explanation:** The "pass" statement is used when a statement is syntactically required but no action is desired.

- 41. Which of the following expressions will evaluate to True?
  - a. if 0:
  - b. if None:
  - c. if "":
  - d. if -1:

Ans: d. if -1

**Explanation:** In Python, -1 is considered True as it's a non-zero integer.

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## 42. What will be the output of the following code snippet?

x = 7
if x < 10:
 print ("Less than 10")
elif x < 20:
 print ("Less than 20")
else:
 print ("20 or more")</pre>

- a. Less than 10
- b. Less than 20
- c. 20 or more
- d. None of the above

Ans: a. Less than 10

**Explanation:** The first condition is true, so the corresponding block is executed. No further checking is carried out in this if structure.

- 43. How do you combine multiple conditions using logical AND in an if statement?
  - a. if condition1 and condition2:
  - b. if condition1 & condition2:
  - c. if condition1 && condition2:
  - d. if condition1 + condition2:

Ans: a. if condition1 and condition2:

**Explanation:** The logical 'and' operator in Python is used for combining multiple conditions. In python keyword 'and' is the logical AND operator.

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# 44. In Python, what is the purpose of the "not" keyword?

- a. It negates a boolean value
- b. It represents null or undefined
- c. It denotes a comment
- d. It converts a value to a boolean

#### Ans: a. It negates a boolean value

**Explanation:** The "not" keyword negates a boolean value, flipping it from True to False or vice versa.

45. What is the output of the following code?

```
age = 25

if age >= 18:
    status = "Adult"

else:
    status = "Minor"

print(status)
```

- a. Adult
- b. Minor
- c. 25
- d. Error

Ans: a. Adult

**Explanation:** The condition age >= 18 is true, so the "Adult" status is assigned to the variable 'status'.

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46.	Which of th	e following	ı is not a	valid wav	to checl	k if a strin	a is empt	v in P۱	vthon?
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- a. if string == "":
- b. if not string:
- c. if string. empty ():
- d. if len(string) == 0:

Ans: c. if string. empty ():

**Explanation:** The empty () method is not available in Python. All the other options are valid.

- 47. How do you use the "in" keyword to check if an element is present in a list?
  - a. if element in list:
  - b. if element inside list:
  - c. if element exists in list:
  - d. if element includes list:

Ans: a. if element in list:

**Explanation:** The "in" keyword is used to check if an element is present in a list.

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## 48. What will be the result of the following code?

```
num = 0
if num:
    print ("non-zero")
else:
    print("Zero")
```

- a. Non-zero
- b. Zero
- c. It will result in an error
- d. None of the above

Ans: b. Zero

**Explanation:** The condition if num checks if num is non-zero; since num is 0, the else block is executed.

49. What is the output of the following code snippet?

```
x=25
if x<23:
  print('yes')
else:
  pass
```

- a. None
- b. 'yes'
- c. 25
- d. No output

#### Ans: d. No output

**Explanation:** The condition in the if structure returns 0. So, the else part will get executed. Since there is a 'pass' in the else part, it does nothing.

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- 50. How can you use multiple conditions with "or" in an if statement?
  - a. if condition1 or condition2:
  - b. if condition1 | condition2:
  - c. if condition1 || condition2:
  - d. if condition1 + condition2:

Ans: a. if condition1 or condition2:

**Explanation:** The logical 'or' operator in Python is or used for combining multiple conditions. 'and' operator can also be used.

- 51. How can you check if a number is positive using an if statement?
  - a. if num > 0:
  - b. if num == 0:
  - c. if num < 0:
  - d. if num! = 0:

Ans: a. if num > 0:

**Explanation:** The condition num > 0 checks if the number is positive.

- 52. What is the purpose of the "else" statement in Python?
  - a. To declare a variable
  - b. To execute a block of code when no conditions are true
  - c. To break out of a loop
  - d. To print to the console

Ans: b. To execute a block of code when no conditions are true

**Explanation:** The "else" statement provides a default block of code to execute when none of the preceding conditions are true.

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## 53. What is the purpose of the if statement in Python?

- a. To define a function
- b. To declare a variable
- c. To execute a block of code conditionally
- d. To create a loop

Ans: c. To execute a block of code conditionally

**Explanation:** The if statement is used to run code based on a condition.

54. What is the purpose of the elif statement in Python?

- a. Execute code if previous conditions are false
- b. Define a loop
- c. Perform arithmetic operations
- d. Exit a loop

Ans: a. Execute code if previous conditions are false

**Explanation:** The elif statement in Python lets you check additional conditions if the previous if is false. It allows for multiple possible actions based on different criteria in your code.

55. An if condition inside another if is called\_\_\_\_\_

- a. Second if
- b. Nested if
- c. Another if
- d. Error in python

Ans: b. Nested if

**Explanation:** An if condition inside another if is called a nested if. This structure allows you to create more complex decision-making by checking additional conditions within an existing if block.