❓ Easy Level (10 Questions)

Q1. Which Python module provides support for regular expressions?
A. `regex`
B. `re`
C. `pyregex`
D. `pattern`

Q2. Which function searches for a pattern anywhere in a string?
A. `re.match()`
B. `re.search()`
C. `re.find()`
D. `re.check()`

Q3. What does the `*` quantifier mean in regular expressions?
A. Exactly one occurrence
B. Zero or more occurrences
C. One or more occurrences
D. Exactly zero occurrence

Q4. Which symbol represents the beginning of a string in regex?
A. `$`
B. `.`
C. `^`
D. `*`

Q5. Which function returns all matches of a pattern?
A. `re.search()`
B. `re.match()`
C. `re.findall()`
D. `re.finditer()`

Q6. Which keyword is used to define a function in Python?
A. `function`
B. `func`

C. `def`
D. `lambda`

Q7. What is the output of:

```
re.search("a", "cat")
```

A. None
B. Match object
C. True
D. Error

Q8. Which scripting feature allows automation of tasks in Python?
A. Compilation
B. Interactive shell only
C. Script execution
D. Manual execution

Q9. What does `\d` represent in regex?
A. Alphabet
B. Whitespace
C. Digit
D. Symbol

Q10. Which function is anonymous in Python?
A. normal function
B. recursive function
C. lambda function
D. generator function

☐ Medium Level (15 Questions)

Q11. What will be the output?

```
re.findall(r"\d+", "ab12cd34")
```

A. `['1','2','3','4']`
B. `['12','34']`
C. `[12,34]`
D. Error

Q12. Which regex matches exactly three digits?
A. `\d*`
B. `\d{3}`
C. `\d+3`
D. `[0-9]*3`

Q13. Which method checks for a match only at the start of the string?
A. `re.search()`
B. `re.findall()`
C. `re.match()`
D. `re.split()`

Q14. Which function replaces matched patterns?
A. `re.replace()`
B. `re.sub()`
C. `re.remove()`
D. `re.change()`

Q15. What will be the output?

```
re.split(r"\s+", "Python is easy")
```

A. `['Python is easy']`
B. `['Python','is','easy']`
C. `['Python', 'is easy']`
D. Error

Q16. Which character class matches lowercase alphabets?
A. `[A-Z]`
B. `[a-z]`

C. `[A-z]`
D. `[0-9]`

Q17. Which function returns an iterator of match objects?
A. `re.findall()`
B. `re.search()`
C. `re.match()`
D. `re.finditer()`

Q18. Which scripting advantage is provided by Python?
A. Strong compilation
B. Platform dependency
C. Rapid development
D. Manual memory handling

Q19. What is functional programming mainly focused on?
A. Objects and classes
B. Mutable state
C. Functions as first-class objects
D. Loop-based logic

Q20. What will be the output?

```
list(map(lambda x: x*x, [1,2,3]))
```

A. `[1,2,3]`
B. `[2,4,6]`
C. `[1,4,9]`
D. Error

Q21. Which function filters elements based on a condition?
A. `map()`
B. `reduce()`
C. `filter()`
D. `apply()`

Q22. Which regex symbol means "any character except newline"?

A. `*`

B. `.`

C. `+`

D. `?`

Q23. Which flag makes regex case-insensitive?

A. `re.M`

B. `re.I`

C. `re.S`

D. `re.X`

Q24. Which function combines elements cumulatively?

A. `map()`

B. `filter()`

C. `reduce()`

D. `zip()`

Q25. Which scripting file extension is used for Python scripts?

A. `.script`

B. `.exe`

C. `.py`

D. `.ps`

🌑 Hard Level (15 Questions)

Q26. What will be the output?

```
re.search(r"^Py", "Python")
```

A. None

B. Error

C. Match object

D. False

Q27. Which regex validates a basic email format?

A. `\w+@\w+`

B. `[a-z]+@[a-z]+`

C. `\w+@\w+\.\w+`

D. `email@\w+`

Q28. What does `()` represent in regex?

A. Optional group

B. Repetition

C. Capturing group

D. Character set

Q29. What will be the output?

```
re.sub(r"\d", "#", "a1b2c3")
```

A. `a1b2c3`

B. `a#b#c#`

C. `######`

D. Error

Q30. Which functional concept avoids side effects?

A. Mutable state

B. Pure functions

C. Global variables

D. Recursion

Q31. What is returned if no match is found using `re.search()`?

A. Empty string

B. False

C. None

D. Error

Q32. Which regex matches one or more whitespace characters?
A. `\s`
B. `\s*`
C. `\s+`
D. `[ ]`

Q33. What will be the output?

```
from functools import reduce
reduce(lambda x,y: x+y, [1,2,3,4])
```

A. 24
B. 10
C. 4
D. Error

Q34. Which function allows recursion in functional programming?
A. lambda
B. reduce
C. def
D. map

Q35. Which regex ensures the pattern ends at string end?
A. `^`
B. `$`
C. `.`
D. `*`

Q36. Which scenario best fits regex usage?
A. Sorting numbers
B. Parsing structured text
C. File copying
D. Loop iteration

Q37. Which functional programming principle emphasizes immutability?
A. Procedural design

B. Object mutation
C. Data transformation
D. State modification

Q38. What does `re.compile()` do?
A. Executes regex
B. Converts regex to string
C. Precompiles regex for reuse
D. Searches pattern

Q39. Which regex matches exactly a 6-digit PIN?
A. `\d*6`
B. `\d{6}`
C. `[0-9]+`
D. `[0-9]{1,6}`

Q40. Which feature enables Python scripts to run from command line?
A. Interpreter execution
B. Bytecode linking
C. Preprocessing
D. Static binding